SELECTIONS

FROM THE

RECORDS OF GOVERNMENT,

NORTH WESTERN PROVINCES.

Vol. I.



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SELECTIONS

FROM THE

RECORDS OF GOVERNMENT,

NORTH WESTERN PROVINCES

BRIDGES.

No. 1.

PONTOON BRIDGE

Remarks by Capt J N Sharpe, Executive Engineer, on a Pontoon Bridge, constructing at Agra, under the Superintendence of Mr C C Jackson, the Magistrate (with Estimate and Plan)

SPECIFICATION

Before detailing the description of Pontoons proposed for this Bridge, I should state that three of them have already been prepared under the Superintendence of Mr C C Jackson, the Magistrate of Agra, formed into a raft and inserted in the body of the present bridge of boats, and thus having been submitted to actual trial by passing over them the whole of the captured Seikh Ordnance, may be considered to answer their intended purpose, the specification will therefore be confined to a description of the original design as carried out by the Magistrate, and the estimate framed upon it, with a few observations from myself of any improvements which a consideration of the subject may have suggested

2 The Pontoons as constructed are cylindrical in shape, with conical ends, the semi axis being 4 feet the diameter of the Pontoons is 5 feet 8 inches, the length of the straight portion is 22 feet, making the total length 30 feet The Pontoon is composed of sheet iron from

one-eighth to three-sixteenths of an inch thick. The plates well rivetted and the interior trussed with iron tires or rings at every sheet of iron. A man-hole is provided, for examining the interior and pumping out water.

3. The centre and two extreme baulks or beams supporting the roadway lie upon saddles bolted to a trussed framing within the Pontoon, as shewn in section, the upper and lower pieces of which are kept in position by two uprights, tightened by wedges. The saddles are composed of 4 pieces of wood firmly bolted together 14 inches in thickness and rising 12 inches above the top of the Pontoon. The baulks or beams which rise in the saddle are composed of two pieces measuring 8 by 22 and one of 3 inches square bolted into the saddle. The intermediate beams, which are 2 by 8 inches, are let into cross pieces mortised into the principal beams.

4. The Pontoons are 18 feet from centre to centre, apart; the roadway 25 feet in width composed of 2 inch fir planks nailed down and covered with an inch of earth, kept in its place by side pieces. The roadway to be protected by a railing of light chain, on posts fixed at intervals of 6 feet.

5. As already stated, three Pontoons of the above dimensions have been made and inserted in the body of the Bridge, in which state they draw about 2 feet, 10 inches of water, and as it does not seem advisable that the centre of each Pontoon should be depressed more than 6 inches under any load that may be brought upon the Bridge (in which case it would draw 3—10 inches) the load that would depress it down to that level would be about 10,000 lbs. Now the roadway being 25 feet in breadth and the Pontoons 18 feet from centre to centre, this weight would give about 22 lbs. per superficial foot. The greatest load which could be brought upon the bridge would be about 70 lbs. per superficial foot, and as it may not be possible at all times to prevent a rush or crowd of people

upon the bridge, it seems scarcely prudent to trust to so small an amount of floatage per superficial foot I would beg therefore to suggest that the distance between the Pontoons be reduced to 16 feet and the roadway to 18 feet in breadth, which would give 35 lbs per superficial foot of floatage

6 The principal beams of the roadway have been made in three pieces for the sake of economy, but I think that single pieces of 8 by 6 inches would be in every respect preferable, and instead of the weak support given to the intermediate beams, I would recommend saddles as for the principal beams, if the central distance between the Pontoons should be reduced to 16 feet, beams would be of sufficient scantling if only 7½ by 4½ and I would make *the saddle and trusses only 4½ or 6 inches thick, preserving* the bays by intermediate pieces, this could not add much to the weight of the framing, and when the Pontoons take the ground they would be better able to support, without injury, the load, passing over them The planking which is of fir, would, I consider, be better if 2½ inches instead of 2 inches

7 From the changing state of the river, it is obvious that no determinate part of the bridge can be fixed upon for the passage of the river traffic, it seems therefore desirable that the central intervals of the Pontoons should have some reference to this object, so that the passage may be made in any portion of the bridge From a measurement of the largest boats in the river it would appear that 26 feet could be a sufficient opening in the bridge, now a raft of 3 Pontoons would at 18 feet interval allow of 30 feet, and at 16 feet would give an opening of 26 feet, and whichever may be adopted a passage may be easily effected by making the raft about 4 feet less than the layer opening and making that portion of the roadway occupying the interval between the raft and the bridge to fall back by hinges

8 The causeway for approaching the bridge on either side may be similar to that already made on the Agra

side of the river, but it should be of sufficient length to be made use of at the highest and lowest levels. The causeway above-mentioned is composed of grooved stone slabs and has a slope of 110 feet, it would therefore require to be 120 feet long, the difference between the highest and lowest level being 12 feet. It would be more convenient to remove the Pontoons floating over the causeway, before they strike the ground, and the small distance to be gained between the first Pontoon and the causeway may be managed by a platform, the beams supporting which should hook on the Pontoon, the other end resting in rollers, the platform will thus of itself change its inclination as the river rises or falls within the limit of floatation of the Pontoon to which it is attached.

9. I have described the means of opening the bridge and approaching it from the shore, because I have not been made acquainted with the Magistrate's views on this subject, and as the means are various, it is probable that he may decide upon a more efficient mode than I have suggested.

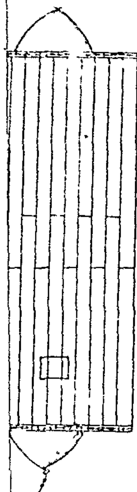
The length of Bridge required is about 1242 feet, giving 68 Pontoons at 18 feet apart and 77 at 16 feet.

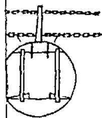
ABSTRACT.

Estimate of Cost of Pontoon Bridge.

50 Maunds of Sheet iron, ...	371	6	10			
10 Ditto of Bar iron, ...	200	0	0			
Labor of making up, ...	480	15	2			
450 Square feet of Roadway,	376	3	0			
				1,428	9	0
Add 5 per cent. Contingencies, ...				71	7	0
				1,500	0	0
Add for 67 more, ...				1,01,500	0	0
				1,03,000	0	0
If at intervals of 16 feet add for 9 more,				13,500	0	0
Grand Total, Company's Rupees, ...				1,16,500	0	0

...al AGRA.





Sd/ J.W. Sharp,
Ex Engr 10th Dvn

No 2

PONTOON BRIDGE AT AGRA

Report of the Committee appointed by Government to report on the IRON PONTOON BRIDGE, *on the River Jumna at Agra, viz*, C ALLEN, ESQ, C S, *President*, MAJOR W. PILLANS, *(Artillery)*, CAPTAIN J R OLDFIELD, *(Engineers), and* CAPTAIN J A WELLER, *(Engineers)*, Members

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Description—The Bridge over the Jumna at Agra consists of 70 Pontoons placed at central distances of 17′ 8″ apart and is thus 1256 feet long

2 The Pontoons are hollow cylinders of sheet iron, their length is 30 feet, including the ends, which are nearly paraboloids, with axis 4 feet in length, the cylindrical portions being 22 feet long, with a diameter of 5′ 7″ 6

3 The two end Pontoons of the Bridge, and the two bearing the raised platforms which form the opening, are similar in form, but of greater length

4 The roadway is formed of part saul and part fir wood planking, 2″ thick, supported by three main beams bolted by double bolts into saddle pieces, which are themselves firmly fixed to the Pontoons, by bolts passing through the iron shell of the Pontoon, and secured to trussed wooden framings within it Between these main beams, slighter beams are framed to give intermediate points of support to the planks of the roadway

5 *Principle of Construction*—The advantages and disadvantages, of close cylindrical vessels with conical ends as Pontoons, have been treated of at length by Sir Howard Douglas in his treatise on Military Bridges He objects principally to their instability, and the form of their prows, when submerged, arresting any floating bodies which may be brought down to them by the stream

6 The first of these objections has been met in the Agra Bridge, by the unyielding nature of the superstructure,

which has been formed by bolting each end of every main beam with two bolts to the saddle of the Pontoon.

7. This plan, forming a very rigid and nearly inextensible roadway, has the disadvantage of rendering it difficult to take the Bridge to pieces, as the strain on the bolts so binds them, that they cannot be extracted after having been some time in use, without injury either to the bolts or beams of the structure.

8. *Steadiness under passing traffic.*—This rigidity of the roadway has the effect, however, of rendering the undulations of the Bridge, under passing loads, very trifling; an advantage which would amply compensate for any extra wear and tear incurred, or strength required thereby, if the Bridge was one which continued to float throughout the year.

9. The Jumna seldom brings trees or other floating bodies down to Agra, or it would certainly be advisable to raise the prows of the Pontoon above the line of greatest immersion.

10. The chief advantage of the cylindrical Pontoon is that its form opposes the smallest resistance to the stream in proportion to the weight it will bear.

11. A disadvantage at Agra, or in any river subject to become shoal, is the depth of the parts immersed, in proportion to the breadth; which causes the cylindrical Pontoons to take ground much sooner than if they were boat shaped.

12. *Buoyancy.*—The buoyancy of the Agra Bridge seems to be quite sufficient for the traffic (*vide Appendix A*). No ordinary loads are more than 80 lbs. per superficial foot of Roadway; or 12,720 lbs. (about 155 maunds) on the surface of roadway supported by one Pontoon: and as the rigidity of the structure of the roadway distributes the weight placed on any Pontoon on at least two others, the actual depression, unless the adjoining ones were

equally weighted at the same time, would be considerably lessened, perhaps to that due to only half the weight passing over

13 Considering the Pontoons as cylinders 22 feet long, and averaging in diameter 5′ 76″ (for the very slightly) and their ends as paraboloids 4 feet long, the total buoyancy is 39,875 lbs

The weight of the Pontoon, found by means of weighing its component parts in the scales, is 5,529 lbs

14 The depth, at which an unloaded Pontoon floats freely, was found by trial to be 14 125 inches, whilst the weight due to this immersion is by calculation 5,562 lbs

15 The weight of the roadway may be taken at 7,942 lbs found by counting and weighing the iron, and measuring the wood work, taking the specific gravity of Saul at 893, and of Deal at 640

16 These specific gravities were obtained by actual weighing of specimens of wood used in the work

The weight of the Pontoon,	5,529 lbs
Added to the weight of a portion of roadway 24×17′ 8″	7,944 „
Equal,	13,473 lbs

which is rather more than equivalent to an immersion of 25 inches A weight of 6,464 lbs or about 79 maunds, in addition to this, would immerse the Pontoon to half its depth, and twice this weight would immerse it nearly 9 inches more, and this being equivalent to 158 maunds or about 30 lbs per square foot of roadway, may be considered as the limit of ordinary traffic

17 A crowd of people, densely packed, is estimated to weigh 70 lbs per square foot A less weight than this, or about 60 lbs per square foot, would bring the roadway to the water's edge, but besides that such an occurrence ought never to be allowed, there would be little danger even if it did, as then the superstructure would itself float, and bear the increased weight

18. *Durability and method of moving the Pontoons about, and adapting the Bridge to the differing states of the River.*—This is principally affected by the oxydation of the metal. This is greatest in those Pontoons which rest on the wet sand of the river bed. Indeed, so great is it in this situation, that it is essentially necessary that means be taken either to prevent it in part, or to support the Bridge on piles for half the year, and this would perhaps be the most eligible plan, but for the difficulty of taking the roadway to pieces and reconstructing it, for though so long as the Pontoons float, it is easy to depress them singly, and detach them from, or attach them to, the roadway, after they have become bedded in the sand, they are very difficult to remove; and to replace them would be still more difficult.

19. Suppose them taken away, it is evident that it would not be safe to wait for the rising of the river before replacing them, as it might very probably rise too rapidly, from the level at which the Pontoons would float, to that at which the roadway was supported by piles or stanchions. But for their oxydation, the Pontoons would make excellent piers.

20. The prevention of this evil is a practical problem which must have received the attention of all persons concerned in the construction of iron ships; and application should be made to the dock-yard Engineers of Calcutta, for information regarding the most approved precautions for preserving iron in contact with moisture. Perhaps in the present case, Sir Humphrey Davy's suggestion of inducing Galvanic agency, by the application of copper and zinc plates to the boats in contact with the stream or wet sand might prove applicable.

21. The oxydation of the iron, so long as it remains in running water, does not appear to be considerable, and is fairly met by a liberal use of Coal Tar, though perhaps plates of zinc would be the cheaper preservative especially

as their renewal would not render necessary the removal of the Pontoons

22 *Opening for the passage of Boats* —The method that has been adopted to give an opening in the Bridge for passing vessels, is by means of a raft of two Pontoons made longer than the rest, on either side of which a platform is made moveable on hinges, so as to connect it with the remainder of the Bridge on either side These platforms are raised by means of an apparatus consisting of ropes passing over two standards erected on the moveable raft, and worked by a windlass assisted by pullies

23 This plan of opening the Bridge is rather more complicated than the usual one of having a Pontoon at each end of the moveable portion, and probably more difficult of management in a strong current, it has the advantage however of floating on a narrower base, and being therefore well adapted for a narrow stream, and in the Jumna there might not, in the dry season, be width enough of stream capable of floating three Pontoons, at 18 feet intervals, and also of drawing them up on one side, which would require a stream of 72 feet wide and 3½ to 4 feet in depth

24 In consequence of the manner in which the superstructure is put together in its length, any change of place in the opening would be attended with much expense and delay, as no portion of the roadway can be taken to pieces without almost wholly breaking up such portion

25 *Suggestions for improvements in Construction* —A defect in the carpentry of the roadway must also be noticed The planking is supported by three principal beams placed at 9 feet apart, these spaces are fitted with intermediate beams, put together in the same plane, by means of mortises in cross beams, attached by iron plates, bolts and screws to the principal beams, the whole of this framework is exceedingly weak, with a great and useless expenditure in bolts, nuts and iron plates

27. Two additional main beams would reduce the necessity of any intermediate framing. These main beams are each of two pieces 9½" deep and 8" broad with an intermediate piece only 4" deep. This middle piece, besides adding to the total width of the beam, is useful for nailing the planking to, thus saving the principal beams from injury from this cause, which is a clever and economical expedient.

28. The actual cost of the present Bridge.—The estimate was Rs. 1,500 for each Pontoon complete with moorings and it has not been exceeded. Seventy Pontoons have been built, the whole of them of same size, viz. five for the two ladder [illegible] ways for boats, and two for the extremities of the Bridge to receive the first shock.

29. The statement submitted by the Magistrate to Government in October 1847, shows an actual expenditure of Rs. [illegible] at the end of September; since then during the months of October and November, Rs. [illegible] were spent, which gives a grand total of [illegible] to the completion of the Bridge.

30. From this must be deducted a sum of Rs. 2,500, advanced for the building of the Ghauts, and the value of the materials on hand or Rs. [illegible]. In the abstract appended to the Magistrate's statement, they are estimated at Rs. [illegible]; but Mr. Mackenzie reports that materials to the value of Rs. [illegible] have, during October and November been expended.

Iron lying at the River ...	[illegible]
Teak Timber ...	[illegible]
Fir ...	[illegible]
Coal Tar ...	[illegible]
	[illegible]
Deduct value of Timber estimated in abstract ...	[illegible]
	[illegible]

31. There are items to the value of Rs. 11,441 classified in this abstract as "items not estimated for;" but with the exception of Rs. 2,500 advanced for the Ghauts, they appear to the Committee as fairly forming part of the

cost of the Bridge, for instance—the expense of building workshops has been included, because they were necessary, and will be, for the repairs of the Bridge

31 The actual cost of the Bridge has therefore been Rs 1,08,359 8-0

Gross expenditure, ..	1,23 226	4	4
Deduct advanced for Ghauts, ..	2 500	0	0
Materials on hand,	12 366	12	4
	14 866	12	4
	1 08 359	8	0

The items unpaid for are the pullies and ropes necessary for working the kulfies, and Iron cables for anchoring the Pontoons, should such be used Compare this with the estimate,—70 Pontoons, at Rs 1,500, each, would cost Rs 1,05,000 —the surplus of Rs 3,359 is only a fair set off against the extra size of six Pontoons

32 The Rs 1,500 estimated for each Pontoon appears to have been divided nearly in the following proportions

	For one	*For all*
Sheet iron,	390 × 70 =	27,300
Other description of iron,	210 × 70 =	14,700
Manufacture of iron, including cost of Coals and Charcoal, &c,	500 × 70 =	35,000
Timber,	300 × 70 =	21,000
Labor on wood work,	100 × 70 =	7,000
	1,500	1,05,000

Now classifying the actual cost in (as nearly as may be) the same divisions, we have—

Sheet iron,	37,635	12	3	
Other descriptions of Iron,	13,488	1	6	
Labor on Iron work, &c,	24,809	12	10	
				75,933 10 7
Timber,	26 003	8	0	
Labor on wood work,	9,851	5	4	
				35,854 13 4

Brought over, ...				Rs. 1,11,788	7	11
Establishment, ...	2,729	8	7			
Miscellaneous, ...	6,208	3	10			
				8,937	12	5
Total, ...				1,20,726	4	4
Deduct value of Materials, ...				12,366	12	4
Rupees, ...				1,08,359	8	0

33. The cost of the roadway is more than the Rs. 35,854-13-4 classified under timber; and the cost of the Iron Pontoons themselves, is less than the Rs. 75,983-10-7, classified under Iron; for a considerable quantity of costly Iron work has been expended on the roadway.

34. *The probable cost of any other Bridge which may be hereafter constructed on the same, or on a similar principle.*—The cost of any other Bridge constructed on a similar principle, will probably be considerably diminished. For instance, the sudden and large demand for sheet Iron in the Bazar, raised the price fully 15 per cent., and this was the heaviest item of expenditure. The prices of other articles at different times are not so easily compared, but most of them apparently increased in price as the demand became large. The experience gained too, must facilitate the workmanship and lessen the labor. Again, as has been explained above, the roadway has been constructed on an erroneous principle, and the suggested improvements in carpentry will diminish the cost of the wood work, and will almost entirely supersede the Iron work, much of which is very costly, in the roadway.

35. *Suggestions for reducing the Cost.*—The cost would be reduced very considerably by adopting the suggestions for lightening the Pontoons, and for improving the roadway, and by purchasing the raw materials, particularly the Iron and timber, at the cheapest marts. The market here is too small to supply any large quantities of such raw materials, without a considerable enhancement of price.

36. *The cost of maintaining the Bridge, the establishment necessary for keeping it in repair and working it* —Mr Jackson proposes for these purposes, an establishment as given in the margin This may be deemed sufficient for working the Bridge, but the Committee think it is impossible to give any accurate estimate for keeping the Bridge in repair, for that must depend entirely on the durability of the materials, which experience alone can decide

ESTABLISHMENT.		
For Repairs		
8 Blacksmiths	40	
1 Head man,	25	
11 Carpenters,	72	
		137
Materials,		100
		237
For Working the Bridge.		
Superintendent's Commission		100
Chuprassee Mullah Gomashtah,		154
Contingencies		65
		319

37 *The durability of the materials of which it is constructed*—The Iron Pontoons, if the corrosion could be obviated would last for very many years requiring little or no repair The wood work has great strain upon it, and will apparently require constant and expensive repairs, but this question of durability has been adverted to in other parts of the report

38 *The probable average annual expense of renewing the materials*—The articles which will require renewing altogether within the year, or oftener, are, cables for mooring the Pontoons, ropes for raising the platforms of the kulfies, and Coal Tar for applying to the Pontoons The cost of cables during the last year was Rs 485 13-0, the cost of Coal Tar, Rs 658 14-0 The ropes of the kulfies have not yet been paid for, nor is it known how frequently they will require renewing within the year Mr Jackson also proposes to substitute Iron cables and chains, for the ropes, which if carried out, will of course obviate those annual items of charge

39 *Suggestions for reducing the probable cost of maintenance.*—The Committee have nothing further to say on this point.

40. *The comparative advantages of an Iron Pontoon Bridge over an ordinary Bridge of Boats as to ease of passage, economy and other considerations which should decide a preference.*—The advantage of the Pontoon Bridge, as to ease of passage, consists in the superiority of the roadway constructed. With Pontoons which are light, it was necessary to make the roadway rigid, whilst heavy Boats oppose so great a resistance to the weight of passing traffic as to permit of the road-way being jointed in a more flexible and economical manner. At the same time, should this extreme rigidity be desired, a similar frame-work, and road-way, could be applied with greater ease and less expense to Boats than to cylindrical Pontoons.

41. As regards economy, the whole question hinges on the durability of the Pontoons, and the ease with which the road-way can be applied to Pontoons. The price of Boats in the first place is less than that of the Pontoon, but that may be counterbalanced by the greater durability of the latter.

42. In a valuable memorandum of the cost of the Dehlee Bridge drawn up by Mr. Roberts, and forwarded with this, (See Appendix B) it is said seventeen Boats built in the Hills, cost Rs. 450 each, while one built at Dehlee, cost Rs. 665, and the price of the platform between the Boats is Rs. 144. The length of one Boat and platform is above 27 feet, *i. e.*, as 3 to 2, compared with a Pontoon and road-way. The cost of a Boat and platform, taking the Boat built at Dehlee which is the dearest, is Rs. 809, while a Pontoon is Rs. 1,500.

43. The first cost of a Pontoon Bridge as compared with a Bridge of Boats, built with platforms between each Boat, is therefore, as (1,500 × 3 or) 4,500, to (809 × 2, or) 1,618; in other words the first cost of the Pontoon Bridge may be taken at two and three quarter times that of a good Bridge of Boats, were the platform of the Boat

and the road-way, made of better materials, and equal in rigidity and every other point to those of the Pontoons, the first cost would be perhaps nearly half that of the Iron Bridge.

44. With regard to annual repairs it is difficult to form a comparison, but it may be assumed that it would be nearly equal. In the *Roadway* the Boats would have a slight advantage, for the lightness of the Pontoons would cause a greater strain on the frame work: and in the *Boats* themselves, the cost of coal, tarring and removing the Pontoons would for some years probably equal any repairs that new Boats would require.

45. Except in the particulars mentioned, the Pontoon Bridge as executed at Agra, may be considered as admirably adapted for a rapid river which never falls so low as to allow the Pontoon to rest on its bed, whilst for Agra, it may be thought that a more boat-like form of support would be better adapted, as drawing less water, though opposing a greater resistance to the stream in proportion to its buoyancy, than the cylindrical form.

46. As regards material, the question resolves itself into one of first cost, and comparative durability, and for this last comparison we have no data; whilst even for the first, the data are imperfect, as by using an uniform thickness of iron and dispensing with the greater part of the iron work of the road-way a very great saving would be made in the construction of a second Bridge; perhaps as much as ⅓rd of the total cost.

47. It may be added that iron is becoming every day cheaper in India whilst wood is becoming dearer. The ordinary tables seem to show that their weight and strength are very nearly in inverse proportion to each other.

48. The Committee cannot separate without recording their sense of the admirable manner in which the Pontoons have been constructed, reflecting as it does such credit

upon Mr. Jackson and the working Engineer Mr. Mackenzie. The Pontoons, some of which have been in the river nearly two years, were all as well rivetted, and water tight, as when first launched into the river; and there is no floating Bridge in the country which can be compared to the Agra Bridge for elegance of structure or for the ease and rapidity with which the passage can be made.

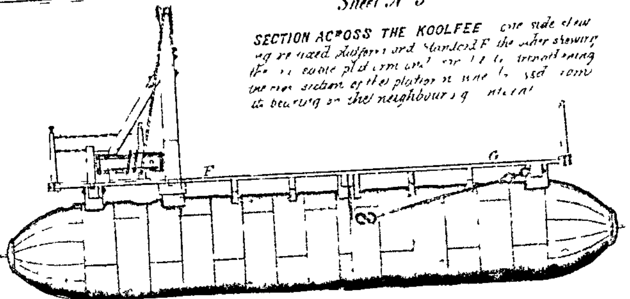
C. ALLEN,

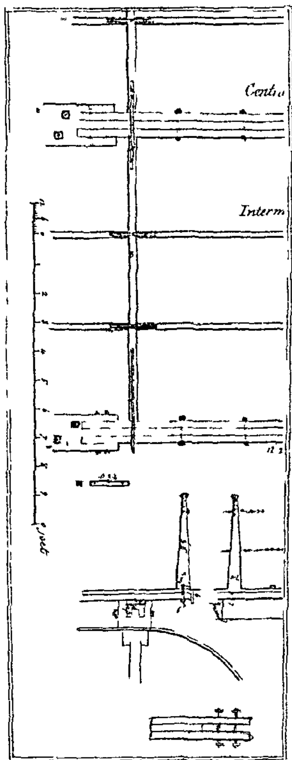
President of the Committee.





10 feet


Sheet No 3
SECTION ACROSS THE KOOLFEE
F
G


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Interm
feet

No 3

BRIDGE OVER THE RIVER KUNOUT AT SHAHJEHANPORE

Constructed for the RANEE *of* POWAINE, *under the superintendence of the District Road Fund Committee on a design supplied by* COLONEL ABBOTT

To Commissioner of the Rohilcund Division

Dated Agra the 14th November 1848

SIR,

In reply to your letter of the 1st instant, No 93, with enclosures, reporting the completion of the bridge over the river Kunout, at Sindhowlee Ghaut, in zillah Shahjehanpore, I am directed to express the gratification of the Honorable the Lieutenant Governor, on receiving intelligence of the completion of this highly useful and ornamental public work, and to beg that you will communicate to the Ranee of Powaine, the satisfaction which His Honor derived from inspecting it last year in its incomplete state, and now from receiving intelligence of its being completed in all its parts

2 To Mr C B Thornhill, the Joint Magistrate and Deputy Collector, the thanks of the Government are due for his public spirited exertions, not only in this, but also in many other works, in which he has most ably and zealously seconded the efforts of the Collector and Magistrate, Mr F P Buller, for promoting the comfort of the people, and for developing the resources of the country To both those gentlemen and others, who were, and are still, associated with them in the Local Committee, the people of the district, and through them the Government of the country, lie under a great and constantly accruing obligation, which no doubt finds its highest reward in the successful result of these benevolent efforts

No 3

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embankment would be amply repaid by the effect which would be gained. At the same time he sent a design of his own, which was immediately adopted by the Committee. It consisted of three arches of equal span and rise, giving a total waterway of 150 feet; Colonel Abbott also expressed a wish, that masonry blocks, which have been found to succeed so well upon the Ganges Canal, should be adopted in the foundations.

4. The design having been determined upon, the next point to be considered was the site. The course of the river Kunout is very tortuous, and in the vicinity of Sindhowlee its valley is extensive; the breadth of the flood, which rises on an average only 9 feet, being nearly ¼ of a mile. It was therefore necessary to take advantage of the ground, so as to reduce the embankment as much as possible.

5. The river has never been known to shift its bed, which being composed of a tenacious clay over which the water seldom flows with any rapidity, there was little danger to the bridge to be apprehended on that score.

6. To ascertain the rate at which the floods passed through the valley, advantage was subsequently taken of the construction of the Bridge of Boats at Lodheepoor, eight miles below Sindhowlee, to contract the outlet of the flood to 125 feet. Through this, the greatest velocity attained by the water, was 4 feet per second; or a little less than 3 miles an hour.

7. There being then no perceptible destructive action of the river upon its banks, the necessity for placing the bridge below a long straight reach was obviated, and the selection of the present position was caused by its proximity to high ground on the north bank.

8. The bridge was placed at right angles to the course of the floods, without reference to the summer water of the river; which it was decided could be subsequently directed towards the bridge, by cutting a canal through the isthmus of the reach above it.

9. A reference to the plan of the abutments in the accompanying sketch, will shew the nature of the blocks which form their foundations. A framing of 12 saul timbers each one foot square, was constructed by laying 6 timbers in pairs, with a space of 5½ feet between each pair at right angles, to 6 others similarly paired. These being let into each other by halving, a platform was produced in which there were four square apertures of about 5 by 5½ feet each. The corners of these were again filled in so as to make the aperture octagonal. Two platforms thus formed and strongly secured with iron bolts and straps were placed in *situ*, 6 feet apart, on the southern bank of the river, in an excavation which had been carried down to the water.

10. On the 21st June 1845, the Ranee of Powaine herself proceeded to the spot, and (concealed by the trench) laid the first brick with much formality; the event being celebrated by a display of fire-works.

11. Before laying the masonry upon the timbers, iron rods 3-8 inch diameter were thrust through holes bored in the platform, and secured below by nuts; the upper part of the rods were then turned into loops one above the other at about 1 foot apart; and through these loops wooden staves were inserted parallel to the platform below. The masonry was then proceeded with in the usual way; the bricks laid round the octagonal apertures being dressed to a point in their centre, as in a circular well. The courses, as they rose, built in the staves, so that the platform became most securely attached to the brick work. This precaution was found of great service, when the blocks reached a depth of about 18 feet, for the friction produced by so large a surface in contact with the closely compacted sand, through which it was sunk, rendered the descent very slow, and although the blocks were loaded above with an enormous weight, it frequently happened that the earth was entirely scooped out from below the

wooden platform so that had no precautions against such a contingency been taken it would have fallen away from the masonry

12 At a depth of 17 feet, a thin stratum of small nodules of kunkur was met with It was not considered safe to leave the blocks at so small a depth upon a doubtful bed They were therefore carried down to 22½ feet, where the kunkur assumed the form of large masses having the interstices filled with very coarse sand This stratum was subsequently found to crop out at a distance of about 600 yards to the north of the bridge, and as it forms the support of all the foundations, the slight dip rendered it unnecessary to carry the northern blocks more than 19½ feet below the bed of the river

13 The operations which have been carried on in the Ganges Canal have produced such detailed reports of the mode of working the blocks, that nothing remains to be said The large size of the blocks used in the Ranee s bridge, however, rendered the greatest caution necessary to prevent the surface from becoming unlevel by unequal subsidence of the corners, the correction of this error being a work of great difficulty and delay at all times, and in extreme cases an impossibility

14 The masonry was built in stories of eight feet, the second story commencing after the Kachees had brought the top of the first to the level of the water by sinking

15 The piers were founded upon double lines of cylinders as they were thought to be more manageable than large blocks, when the adjustment and commencement of the work was necessarily under water The four abutment blocks and 16 pier cylinders having reached the bed of kunkur before alluded to, were filled with chippings of bricks, kunkur, refuse of the lime kilns, and fine sand, about one foot at a time being filled in, and closely rammed The apertures were then closed with flat vaults, the surface of the dome being on the level of the bed of

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the river. To effect this, it was necessary to employ gangs of men night and day to bale the water, so as to keep the masonry from being submerged until the mortar had set.

16. The two blocks forming each abutment were then connected by an arch, and the masonry continued to a height of 9½ feet, a double arch was also introduced into the body of the piers, so as to throw the weight of the bridge upon the centre of the cylinders, and relieve the vaulted spaces between them.

17. Having observed the great difficulty of preventing some settlement in retaining walls, by which an unsightly crack is produced in the parapet, a cylinder was sunk in the line of each wing wall, about 10 feet to the rear of the abutment; 12 feet beyond this, short piles were driven and covered with stout planking; arches were then thrown from the abutment to the cylinder, and again from the cylinder to the piles; so that the enormous weight of the wall, which is 29 feet to the top of the parapet, is divided upon three strong points instead of being thrown upon the insecure soil, which immediately adjoins the bed of the river.

18. The alterations in the bed of the river, caused by the sinking of the cylinders, had by this time distributed the water between two of the piers, leaving only one arch dry at the commencement of the year 1847. It therefore became necessary to construct two centres, which should offer no obstruction to the floods, should any accident protract the completion of the arches beyond the commencement of the periodical rains.

19. The following design was accordingly selected, as combining the greatest strength with simplicity.—*Vide Sketch II.*

20. When, however, it was erected, the joints were found so defective, in the nicety so necessary to ensure strength by an equal distribution of the stream upon every part; and the skeleton centering first put up, having fallen, in consequence of the neglect of the carpenter to brace it

at once, the supports, *Figs. 2 and 3* were added, the former under the southern and the latter under the middle arch.

21. The northern space was nearly filled with great masses of sun dried bricks, and a pattern having been traced on the ground, and built upon 6 inches, in relief as a guide, the southern and centre arches were commenced together, and after advancing ⅓rd together, the whole of the masons were put upon the former, so as to complete it at once, and enable the massive centering, which would oppose so great an obstacle to the floods, to be removed. The north arch having been keyed in May, was at once brought to its bearings by a very clever suggestion of Cheda, the head mason.

22. The support was composed of pillars of sun-dried bricks only. Upon flooding their foundations, they yielded to the superincumbent weight of the arch, which gradually settled 3 inches, within 8 hours of being keyed; the subsequent settlement was not quite half an inch, being nearly 3½ inches altogether. This although trifling, compared to the settlements which took place in many stone bridges under celebrated French Engineers, is nevertheless large, and as will be seen, greatly in excess of that of the other arches.

23. On the completion of the northern, the middle and southern arches were proceeded with. The former, being kept in advance, was completed some days before the latter, and the centerings were lowered by driving out wedges, the moment the arch was keyed. Although the method of inserting these wedges was very rude, compared with that adopted in England, yet, they were found to answer the purpose designed; while the want of skill in the carpenters prevented the attempt of any thing more complicated. The settlement of the middle arch was 2 inches; that of the southern barely 1 inch.

24. The completion of the arches and removal of the centerings before the occurrence of any severe flood, prevented any hindrance to the navigation of the river; but the rise of the water, and consequent submersion of the wing wall foundations, combined with the cessation during rains of all brick making, threatened to delay most seriously the progress of the works. Most opportunely at this juncture, the materials of a distillery, belonging to the late firm of Barron and Co., situated upon the river Kunout, about 40 miles above the bridge, were offered for sale. The Committee at once became the purchasers of the bricks, upwards of 5 lacs of which were floated down the river before the cessation of the floods, and as soon as the traffic of carts recommenced in September, the bridge was so far advanced as to admit of their being allowed to pass over it.

25. The work was continued from this time without any interruption, or the occurrence of any incident deserving of notice, and finally completed on the 9th April 1848.

26. The embanked approaches were commenced in October 1846, and carried up in layers, 5 feet at a time, in order that this foundation of the road might be gradually consolidated by one whole rainy season, and even with this precaution, when the road had been completed and traffic on it commenced, the subsequent subsidence, by consolidation, was so great, as to cause considerable inconvenience, and require constant repair; nor can it be hoped that this mound of earth (upwards of 25 feet high at the bridge) will be kept in an efficient state of repair, without constant care and attention for some years, and the protection of the grassed slopes from the action of the rain by the construction of low walls on each side of the road, having in them apertures, leading to tiled or masonry shoots.

27. The local circumstances under which this bridge was erected, were upon the whole very favourable. Excellent kunkur for lime was produced within ¼ mile of its

site A good foundation of kunkur was found at 22½ feet below the bed of the river Charcoal for burning the lime was obtained at a cheap rate from the forest in the north of the district \ Timbers for the centres passed down the river during the floods, thereby saving all expenses of land carriage And lastly, any number of excellent brick layers was at all times procurable from the city

28 The trusses which formed the centerings, although composed of heavy timbers were raised with great facility in the following manner The piers being raised to the intended height and levelled, a large boat, 30 feet beam, was floated between them Upon this a strong scaffolding was erected, and a platform, laid upon it, rather above the piers To this platform, the timbers were raised singly and then joined together, the feet of the rafters laying up on the temporary piers, upon which the centering was afterwards to rest, in the position they were intended to occupy permanently The collar beam and iron tie having been adjusted, the united efforts of about 20 men raised the truss which was secured by guys The boat was then shifted down the stream, and a second truss raised and secured by wooden braces to the first The main trusses having been raised and secured, the smaller trusses were adjusted above them, and similarly braced, the form of the arch was approximately given by curved pieces of mangoe wood laid upon the upper trusses across them bamboos were secured in the usual manner, and the correct curve obtained by a layer of clay protected by a thin coating of mortar

29 In turning the arches, the correct radiation of the voussoir courses was secured by the erection of a wooden railing on either edge of the centering, the bannisters of which were *radii* to the curve, and a correct plan of half the arch in relief was constructed upon the ground, close to the arch, from which the work was verified from time to time as it advanced

30. The bricks for the arches were most carefully selected; only those of the deepest red being used.

31. In the southern arch, which was first turned, the mortar was not ground more than 4 hours, in the expectation that by carefully keeping the masonry well moistened until the keying of the arch, and stricking the centering *instantly, the enormous compression to which it would* be then subjected, would bring the bricks into actual contact, and ensure a perfect consolidation of the mass. When, however, the versed sine of this arch was found to have diminished 3½ inches, the possibility of the alteration of the form of the curve in coming to its bearings rendered the repetition of the experiment unadvisable; the mortar was therefore continued in the mill 8 hours for the second arch, (in which the settlement was found to be only 2 inches), and for 12 hours in the third arch, where the versed sine was found to have been lessened only one inch.

32. In stone bridges, where the voussoirs are composed of a single stone, the elasticity of the wooden centering causes each joint to open and close in succession, as the gradual addition of the weight produces a change in the form of the centre.

33. In this bridge, however, the whole effect appears to have accumulated at one point. For when about 13 feet of the arch had been laid, the extrados at about the 40th course commenced opening, and the joint continued to separate until the arch had advanced to about 10 feet, when the direction weight being altered, the aperture then about 1½ inch wide, gradually decreased until, on the keying of the arch, it nearly closed, in consequence of the voussoirs being composed of so many pieces. It did not entirely close, but after the centering was removed, there was still a distinguishable crack.

34. The highest flood level has been placed at the springing of the arches, but although such floods are re-

ported to have occurred, the highest within the last 8 years has not reached within 1 foot of the height of the piers. It was mentioned above, that the breadth of the flood was nearly ¼ mile, this however arises partially from the flood level of the river Ghurra being higher than the Kunout, which flows into it. The cause of this is probably the excessive falls of rain in the hills, where the Ghurra rises; the Kunout on the other hand having its source within the Shahjehanpore district, receives only the drainage of the immediate neighbourhood.

35. Instead then of receiving the superfluous stream of the Kunout, the Ghurra actually pours some of its own flood into it, causing a counter-current, which is felt as high as the city of Shahjehanpore, and a heading up of the stream which is felt above Sindhowlee.

36. The actual flood section, for which it was necessary to provide an outlet at the bridge, may be taken at about 1,400 feet, and as this is less than the area of the section of the bridge without the arches, it is to be hoped that no heading up of the water, and consequent destructive action of the current upon the bed below the bridge need be apprehended.

37. Previously to the setting in of the rains of 1847, the intended canal was cut through the neck of land formed by the bend of the river above the Bridge, and the old channel bunded across, so that the Bridge is now at right angles to the permanent bed of the river, as well as to the direction of the floods.

6.—APPROACHES.

15,31,028 cubic feet road @ 3 as. 6 pie, 3 as. 9 pie, and 4 annas per foot, ...	3,769 8 6	
2,028 Coolies for sloping sides from 1 to 2 annas, ...	209 12 0	
A dam from bridge to west, ...	60 0 0	
134 Coolies for making dam from 1 to 2 annas, ...	16 5 9	
Compensation for owners of land,	93 12 0	
1,350 mds. of Kunkur for laying over the Bridge @ 1 Re. per 100 maunds, ...	13 8 0	
		4,160 14 3
		27,276 11 0
Deduct realized from sale of wood, &c., employed in centering, ...		1,276 11 0
	Total Co.'s Rs.	26,000 0 0

C. B. THORNHILL,

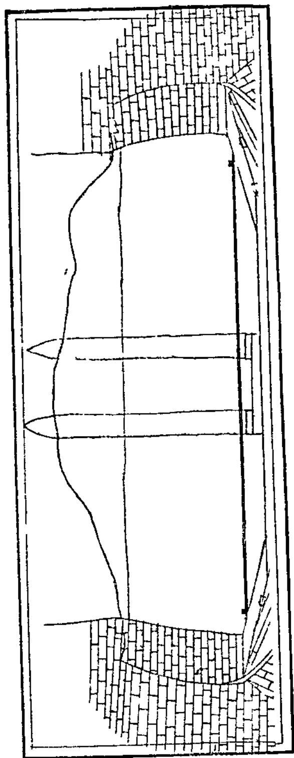
Secy. Road Fund Committee.

Plan of Pier and Starlings

Part of Thabured Block & Wing with Cylinders
in the level of bed of River

Cross Section through Pier
showing Cylinders foundation and Arch

Scale of 20 feet to 1 Inch



No. 4

ELLIPTICAL TUNNEL BRIDGE AT SEONEE

Letter No 3662, dated Allahabad, 9th March 1849, circulated by Major A H E Boileau, *Superintending Engineer Central Provinces*

Sir,

I have the honor of forwarding, for your use, a plan of the Elliptical Bridge, built at my suggestion by Lieutenant D Briggs, Executive Officer of the Great Deccan Road in 1847-48, one mile southward of the station of Seonee, and which, after having been exposed to the action of two monsoons, or rainy seasons, has been found to answer its intended purpose, admirably, *viz*, to substitute a cheap tunnel, with scarcely any foundations at all, in place of the ordinary kind of bridge, with massive and costly foundations, which have usually been considered necessary in bad sites, and specially on the black cotton soil of Malwa and Gondwarra

2 The Elliptical Bridge, of which the plan is herewith circulated, has a water way of 10×6 feet, with a tunnel about 22 feet long and 1½ feet thick, lying upon a thin bed of concrete, (as shown in the drawing,) and without any other foundation than a front and rear drop curtain of 2½×2½ feet section, by which the stratum of black soil, underlying the concrete, is maintained in a compact state, and any cutting away of the bed of the nullah by the current is guarded against though this had been partially provided for by sinking the floor of the tunnel, nearly a foot below the natural bed of the stream

3 The cubic contents of this bridge are 1,208 feet of plain masonry, (burnt bricks set in lime mortar) and 1,030 feet of elliptical masonry of the same kind, the whole being plastered as usual, and costing Company's Rs 248 10 0 The kind of bridge, for which it was intended as a substitute, was to have cost 640 Rupees, the tunnel being 24 feet long, the parapets 2′ thick with a

... olds of ...

... way of 10×7 feet ... is most strikingly in ...

... Captain J. ... Executive ... A. H. E. Boileau's ...

The concrete, I ... consists of,

One part.—Well ground mortar made with kunkur, lime, and bajree or coarse sand; in the proportion of 1 of the former, to 2 of the latter;—

One part.—Coarse bajree or gravel;—

Two parts.—Well burnt bricks, broken up into pieces which would pass through a ring of 1½ inch diameter.

The mortar, gravel, and broken brick, to be intimately mixed in small heaps, so as to preserve their relative proportions throughout the mass. The mortar should be used quickly, as it comes from under the rollers, and never allowed to dry till the work is complete.

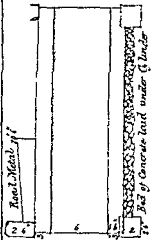
The concrete may be laid down in layers of from 6 to 9 inches thick, ... beaten with heavy rammers, whilst thoroughly we... ...ore bei... allowed to set. In case of more than ... d, the lower one should not be ... ...r one is added.

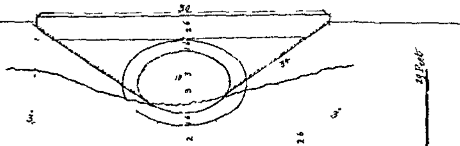
The bottom o... ... well ramm... before the concr... ... il be ... ...ressible by the ...

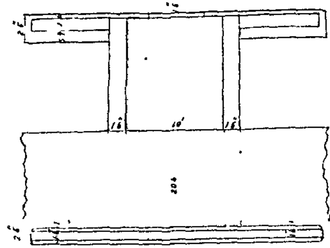
5th April 18...

PLAN
of an
Elliptical Bridge

Built on the Great Deccan Road one mile to the south of Seonee







10 9 8 7 6 5 4 3 2 1 0 10 20 Feet

(Signed) 4 H B Boileau Major
Supg Engineer Central Provs

No 5

CONSTRUCTION OF WOODEN BRIDGES

Letter No 4903, dated 5th October 1849 from CAPTAIN E W S SCOTT, SECRETARY MILITARY BOARD, *Fort William to the* SUPERINTENDING ENGINEER, NORTH WESTERN PROVINCES, *respecting the proposed* BRIDGE OVER THE RIVER SURJOO AT BAGESHER IN KUMAON

SIR,

With reference to the 2nd para of your letter No 4091, dated 26th April 1849, I am directed by the Military Board to annex a copy of Mr Secretary Thornton s letter No 694, with annexment on the subject of the proposed bridge over the Surjoo at Bagesher, and of the introduction of wooden bridges of large span in the Hills

2 The Military Board request that your attention and that of the Executive Officers in the North Western Circle may be directed to the best modes of erecting such Bridges

3 There is a model in the Military Board Office of a light wooden bridge, upon a practical and economical principle, that appears to offer facilities for construction

4 A plan* drawn from the model and sufficiently correct to enable you to understand the principle upon which the bridge is put together and of its details is annexed

5 A copy of the descriptive letter which accompanied the model is annexed

6 The bridge may be briefly described to consist of planks, the side pieces being formed by vertical diagonals, fixed between two longitudinal planks, formed with bits above and below equally strong

7 The lower longitudinal planked beams bear the sleepers of which the roadway rests

8 The sleepers are notched over the planked longitudinal beams, and hold them at the same distance apart The upper longitudinal planks support nothing except the tension in the diagonal side pieces they give rigidity

* Vide Appendix

and strength to the whole structure, making the full depth of the side pieces or 7 feet (as the case may be) form one resistance to any side-stress which may tend to break the bridge. The diagonals between the upper and lower plank-beams act, in a measure, as the oblique rods of a tension bridge. The roadway is formed by a diagonal planked platform.

9. It depends upon the length of the bridge whether intermediate cross-binders are necessary.

10. When the span exceeds 20 to 30 feet, the length of the bridge is strengthened by a frame-work which binds together the several parts, and makes the structure firm.

11. *The posts of this truss are let over the planked* pieces, keying them apart and in upright positions; and a strong cross-beam under the roadway, supports the longitudinal planked side beams, and strengthens the connections between them and the upper beams, making the whole side piece firm and extending on either side, being braced to the tops of the posts by struts and iron bands. In a span of 60 feet two such keying braces are required.

12. The Military Board request that you will fully consider the above principle as applied to wooden bridges, and they authorize the construction of a model under your superintendence, in order that its strength may be tested.

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tance between the diagonal planks being 20 inches; such sleepers as are placed between the diagonal are notched, so as to allow of their ends overlapping the horizontal planks, and thus form binders to prevent the latter from bulging out on any great pressure being applied. Over these sleepers planks are nailed diagonally to form the roadway. The diagonal upright planks are pinned together at the point of contact, in the centre, as well as above and below. The roof is a light one of leaves, as generally used in the Straits.

Mr. Thompson, Civil Engineer, Singapore, told me he was prepared to construct bridges on this principle, 130 feet span for about Rs. 700 each.

The model is on a scale of 1 inch to a foot and represents therefore a bridge 21×12. It has been proved with $276\frac{3}{4}$ lbs. placed on it, a trifle less than $2\frac{1}{2}$ cwt. which caused it to yield equal to 3 inches, but the model received no injury. The expense of such a bridge of the very best materials at Moulmein is about Rs. 10 per running foot; one of the size of the model would cost Rs. 193-7-4, and requiring no greater degree of skill in erecting than that possessed by the most ordinary description of workmen; hence it is likely to prove useful in countries where wood abounds, as even should plank not be available, small trees, if care was taken in fitting them at the points of contact, would answer equally well. The traffic over the bridge at Singapore is very considerable. Buffaloes with heavy carts are continually passing and repassing all day, and had done so for two months ere I left without damage to the bridge in the slightest degree.

The bridge is a temporary one built to keep open the road, whilst the pucka one is being re-built, and hence the use of inferior material to save expense; the cost I believe did not exceed Rs. 60 or 70.

No 6

DESIGN *for a* BRIDGE *over the* NERBUDDA RIVER *near* JHUBBULPOOR, *by* LIEUT DAVID BRIGGS, *Surveyor*, *Jhubbulpoor and Kamptee Road*

SPECIFICATION *for the construction of a* TIMBER BRIDGE, *with stone piers and abutments, across the river* NERBUDDA, *at* GAWARIE GHAT, 3¾ *miles distant from the station of* JHUBBULPOOR, *on the* GREAT DECCAN ROAD

1 LENGTH OF BRIDGE —The Bridge will be 970 feet in length, divided into ten bays, the distance between the centres of the piers being 97 feet

2 ABUTMENTS —The south abutment shall be built 15 feet, horizontally, and 12 feet vertically into the Bank, which is composed of very stiff clay It shall be built in steps towards the rear, so as to give it a batter of 6 inches in 18, until it has acquired the requisite breadth of 15 feet, below which the foundation will be carried down 12 feet, at an angle of 35°, built in steps of 12 inches wide and 18 deep, as shown in Fig 3 The north abutment will be sunk into the bank 15 feet vertically, with a base of 14 feet, protected in the rear by four steps of 18 inches in breadth, and 3′9″ in depth The face will also be secured by four steps of one foot each

3 PIERS —The foundation of each pier shall be sunk until it rests either on rock, or such hard compact soil, as to place any chance of shifting out of the question The masonry shall be laid in courses of two feet in thickness, decreasing in steps of 12 inches wide and 18 high towards the level of bed of river The piers shall be 40 feet high, 10 feet wide at foot, and four feet at top, 28½ feet long at bottom and 17 feet at top, having the up stream face protected by the blocks of stone, composing the column, being laid so as to form a cut water projecting one foot

well seasoned teak, and the whole of the wood used in the bridge will be steeped in a solution of corrosive sublimate for the space of 7 days.* All the wood used in this bridge will be cut up on the spot by a saw-mill driven by water, of a very cheap and simple construction; a description and plan of which are given in Appendix B.

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* *Note.*—I have been deterred from making provision in this specification for either painting, or paying with dammer, the wood-work of the bridge, by the written testimony of so many experienced Officers of the Engineer Department, both in this country and in England, which goes to prove "that painting or paying is one of the greatest causes of decay "in timber, as it completely prevents the air from acting on the wood," thereby keeping all moisture within, which of itself is sufficient to decay it.—*Professional Papers of the Royal Engineers, vol. v, page* 282.

Estimate, *framed by Lieut. David Briggs, of the probable expense that would be incurred in building a Bridge of ten bays, on the "double truss" principle, across the River Nerbudda at Gawarie Ghat, near Jubbulpoor, on the Great Deccan Road; according to the foregoing specification and accompanying plan.*

Agra, 29th March, 1850.

No.	Description.	Company's Rupees. Rs.	As	P.	Rs.	As.	P.
8877724	Cubic feet of masonry in abutments and piers at Co.'s Rs. 14 0 0 per 100 cubic feet,	12,428	13	3			
6000	Rg. ft. of teak timbers 14" by 9" at 0 2 0 per foot,	750	0	0			
[illegible]	[illegible]	750	0	0			
	[illegible]	1,200	0	0			
	[illegible]	206	0	0			
	[illegible] each,	257	8	0			
6000	Rg. ft. sleepers 7" by 7" at 0-1-0 per foot,	375	0	0			
412	Braces 10' by 5" by 5" at 0 10 0 each, ...	257	8	0			
210	Iron straps (screws included) 9' by [illegible]	420	0	0			
	[illegible]	2,934	4	0			
	[illegible]	125	0	0			
	[illegible]	1,000	0	0			
[illegible]	[illegible]	238	11	10			
	[illegible]	1,500	0	0			
	[illegible] work, ...	1,000	0	0	23,492	13	1
	Total Co.'s Rs., ..				23,492	13	1
	Total, Contingencies, at 5 per cent., .				1,124	10	3
	Total Co.'s Rs., .				24,617	7	4

This includes the fitting and setting up of all the wood work.

APPENDIX A.

DOUBLE TRUSS BRIDGES.

The following is quoted from the description given of "the double truss" bridges in Mr. Weale's work:—

"In America there are already many of these bridges "on a scale of magnitude truly gigantic; among the most "important of these is the one erected by the celebrated "Engineer, Moncure Robinson, Esquire, for carrying the "Richmond and Petersburgh Railway across the falls of "James' River at Richmond. The length of this bridge "across the river is 2,900 feet, and the trusses are sup-"ported on eighteen granite pillars, the distances between "the piers varying from 130 to 153 feet. The piers are "founded on the granite rock over which the rapids flow. "Their height above the surface of the water is 40 feet, "and they are carried up with a batter of 1 inch in 2 feet "vertical, up to this height of 40 feet above the water, "where their dimensions at top are 4 feet in breadth by "18 in length. The floor in this bridge is on the top of "the truss frames, and the depth of these being 20 feet, "the road way is carried horizontally across the River, at "an elevation of 60 feet above the water. This bridge "was completed in September, and its cost was about "£ 24,200 sterling. In addition to this great work on Mr. "Town's principle, executed by Mr. Moncure Robinson, "may be mentioned another on the same principle across "the Susquehannah, 2,200 feet in length with spans of "220 feet; besides several others. These bridges may be "constructed of any kind of timber, however soft, provid-"ed planks of about 27 feet in length can be sawed out "of it while pine, spruce, and poplar, have been exten-"sively used in America; but oak is objected to, on account "of its tendency to spring or warp, if not well seasoned."

APPENDIX B

VERTICAL SAW MILL

The annexed sketch of a cheap and simple vertical saw mill, in common use in America, will show the means I intend employing in cutting up the large quantity of timber, I shall require in the construction of the work above treated of The following references to the sketch will make the whole construction perfecty clear A, the dam, formed of squared logs resting against a standard 12″ by 12″ strutted from the rear, the dam being filled to the requisite height by a bed from the Nerbudda provision being made to carry off the surplus water B is the sluice, 5 feet broad, 18 inches high, and 4 inches thick, which, when it is wanted to work the saws, is raised, and admits the water into the trough C, to the wheel D, whose outer diameter is only 5 feet, in order that the velocity of the water may give it as many revolutions as possible, consistent with the necessary power, and thus enable the saws to make as many strokes as the wheel makes revolutions The length of the wheel is 5 feet E, a crank on the wheel shaft, to which is fixed the connecting rod F, (which is fixed to the bottom of the saw frame G,) which, carrying the saw or saws, runs up and down between the standards, having an alternating motion communicated to it, to the extent of the double length of the crank arm E, K, is the log to be cut It is mounted on the frame L, which has a rack *d, d,* fixed upon its under surface, and which is supported by the rollers *a, a, a, a* The pinion N, on the axis of the wheel M, works in the rack, and according as the wheel moves forward and backward works the frame towards or away from the saws Motion is communicated to the wheel by the pall *c, c,* (which may be lifted out of gear, when necessary, by the rope and ring H), and the other end of which is pinned into one of the holes in the arm of the bent lever O This lever is moved backwards and forwards by the rod *e, e,* which is jointed to the bent rod P, fastened

at one end to the frame of the building, and at the other to the frame carrying the saws. In this mill I intend using three saws at once. Almost all the parts which in this sketch are shown as of iron, may be made of hard wood; and I believe that the mill may be set agoing for about 400 Rs. At a very moderate calculation, it may, with the assistance of two coolies, saw up 2,000 running feet of timber per diem.



Sketch
of a
SAW MILL
of simple construction

G

K

G d L

a a a

A

A

C

D Briggs Lieutenant
Executive Officer,
Great Deccan Road

2. It will be observed that numerous bridges, partly of masonry and partly of timber, have been constructed in this Division, and that although no precautions have been taken, in order to protect the timber from the ravages of the white ant and dry rot, beyond the common application of rosin, arsenic and oil, it does not appear to have sustained any injury.

3. Most of these bridges have been recently constructed. There are, however, two referred to by the Shahjehanpore Committee as having existed for very long periods without any apparent injury to their timbers; one from 1747 A. D., the other from 1819.

4. White ants will not, I believe, attack any substance that is not in a state of repose, and the security of the timber in the bridges referred to, is, I have no doubt, mainly to be attributed to the vibratory motion communicated to it by the constant use of the bridge. Of course, none but the hardest and darkest colored portion of the timber, is employed in the construction of such bridges.

III.—LETTER *dated 15th April 1850, from* J. R. BARNES, ESQUIRE, C. S., *Secretary to the Road Fund Committee of the Shahjehanpore District, to* H. PIDCOCK, ESQ., C. S., *Commissioner of the Rohilcund Division.*

SIR,

In reply to your Circular No. 9, dated the 16th February last, forwarding copy of a letter from Government, with copy of its enclosure, the Committee would beg to state that no provision has been made to protect the timbers used in their bridges from either the ravages of the white ants or the effects of the dry rot, beyond what is commonly applied, *viz.*, a composition of rosin, arsenic and oil, boiled together.*

* In the proportion of rosin 1 seer, arsenic 2 chittacks, and oil 1 seer.

2. At the same time, they would remark, that there are many bridges, within the immediate vicinity of this city, built on this principle, *viz.*, of combination of masonry and timber, which, though they have been built for many years, have yet, as far as the eye can judge, their timbers quite sound and entire: for example,—

I. A small bridge, combining masonry and timber in the Kukra mohulla, near to the Mudra Khel Chokey, said to have been built by Akhoon Moolla Jubbar Khan, in the year 1747.

II. The large bridge over the Kunout, built by Hukeem Mehdee in the year 1819. In this, the timbers have been proved quite sound, when during the last year, the shape of the centre arch was lessened.

III. Those belonging to the old Lodhipoor bridge, when broken up in the year 1846. Besides these, there are in the district many others.

3. Facts proving, perhaps, that protection is afforded to these timbers, from the ravages of the white ants, by the vibration caused by the passage of wheeled conveyances, &c. Of the effects of the dry rot, but little fear need be entertained; provided a careful selection of the timber is made, and all those, in which the slightest appearance of a white vein is visible be discarded.

No. 8.

POOLGOOZUR BRIDGE IN JOUNPORE.

MEMORANDUM *(dated 23rd January, 1852), by* M. C. OMMANNEY, ESQ., *Collector and Magistrate of Benares, on the restoration of the* POOLGOOZUR BRIDGE, *crossing the* BURNA NUDDEE, AT BENARES.

This bridge was built in the Hejira year 952; the letters in the Persian character forming the chronogram.

The materials were furnished from an ancient Hindoo temple, the site of which is still traceable, which was demolished by the Moosulmans.

When this district came under the British Government, the bridge was in a very dilapidated condition, and it appears to have previously given way at the same place where the accident occurred which has led to the present alteration and restoration of the structure.

I find that in 1797, A. D. Major General Garstin (who built the large bridge over the Burna at Benares) submitted an estimate for its repair, amounting to Rs. 15,418.

The amount was considered so large that it was disallowed, and occasional trifling repairs were given, until A. D. 1816, when Captain McPherson submitted an estimate amounting to Rs. 9,977, which received the sanction of the Governor General, by minute, dated 1st November, 1816.

This sum was expended in patching up the stone-work, and in constructing a supplementary bridge of brick-work consisting of three arches, twelve feet span each; the position of which will be seen by reference to the *Plan No. 1.*

The rains of 1847 were unusually heavy. The floods came down the stream in a volume of water of unprecedented force and quantity, and being pent up by the insufficient escape afforded by the narrow waterways, the element expanded out for an extent of 2,760 feet, forced a way for

itself beyond the brick bridge, making a gap in the earth of 100 feet wide, and 20 deep At the same time, the confined stream, being about 10 feet higher on the upper side of the bridge, fell over the lower or down stream side, in a cascade, tearing and carrying with it the parapets, and in some places, one or two courses of stone The rickety nodding pier, repaired by Captain McPherson, gave way, and left the unsupported roadway standing,—as shown in Major Kittoe s drawing of the injury, *Plan No 2*

I submitted a report to the Commissioner His Honor the Lieutenant Governor, by a letter dated 14th January, 1848, sanctioned such immediate measures as would repair the damage at a moderate sum The Superintending Engineer called for my opinion, and a rough plan and estimate Major Kittoe obligingly furnished me with a design for throwing the two contiguous arches into one, by retaining the lesser arcs, and continuing the lines of the larger until they intersected each other or met This was submitted with an estimate, and Major Laughton also formed an estimate, and submitted a design for rais ing the entire structure, by removing every alternate pier, at a probable cost of Rs 23,000 Eventually Major Boileau placed an assignment of Rs 2,000 at my disposal

But in this correspondence we had reached the month of April, and it was impossible to turn the arch before the setting in of the rains My attention was therefore direct ed to the removal of the sunken pier and the dangerous suspended causeway, over which heavy carts still conti nued to pass, without its giving way Small blasts of powder were used, and as much material as possible re moved by crowbars and wedges

Nothing however could move the stones of the pavement. At length, by larger and more numerous mines, the mass gave way, and it was found that the difficulty of removing the stones was caused by the lateral pressure of the mason ry, for, directly the roadway (which acted as a wedge

gave way, the third old arch cracked and opened, and the pier leaned over about two and a half inches.

All that was done this year (1848), therefore, was to form a dam of earth above and below the two first old arches, to bale out water, and to repair and give a new footing to the eastern abutment. In order to afford a crossing for passengers and light carts, a timber causeway was constructed, by uprights placed on the sunken pier and stout horizontal beams placed with their end resting on the dismantled pier and abutment. This answered admirably, and sustained the pier, keeping it in position. At the same time, all materials were collected during the rains; preparations were made for operations in the dry season: and 510 stones for the voussoirs of the arch were procured from Chunar. A well *leeped* platform was constructed, and the arch in its exact size drawn on it, and each stone shaped accordingly. The stones were arranged and numbered so that they were ready for fixing in permanent position.

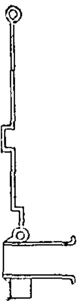
The first arch was completed by June, 1849. Before removing the centring, Major Kittoe attempted with a lever to thrust back the protruding masonry of No. 3 arch, and was partially successful.

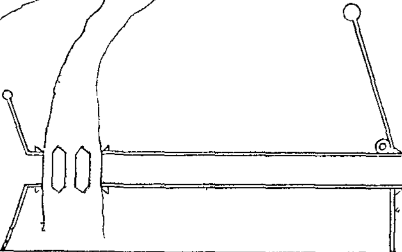
The cost of the work was Rs. 2,347. An additional sum of Rs. 1,535 was assigned to me by the Superintending Engineer, on 9th June, 1849.

A report was submitted, dated 6th August, 1849; and as I had Rs. 1,292 left in hand, Major Boileau sanctioned the application of the same measures to the next two arches.

In the year 1850, the next two arches were converted into one, and Rs. 1,473-13-4½ expended. The perfect feasibility of the proposed alteration was thus shown. It must be confessed, that considering the rickety condition of the pier, the undertaking was hazardous, and success doubtful. Lieutenant Colonel Goodwin visited and inspected the work, and pronounced his unqualified approval.

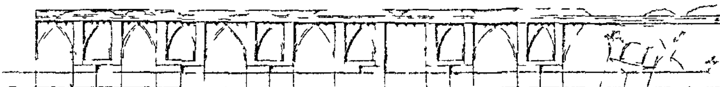
Sketch shewing Ground Plan of the OLD BRIDGE lines of flood, and course of stream round the end of the Bridge in 1847

No 2

BRIDGE as it appeared after the FLOOD of 1818



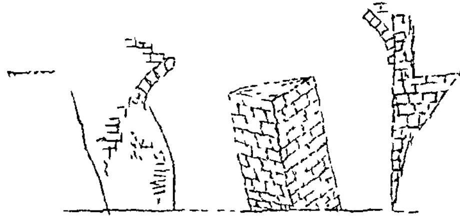
Sketch shewing the different Centrings employed



Signed
H C Ommanney
Magistrate

Signed
W K Hoe Major
Architect

Shews the excavation made to examine the foundation, also the counterfort made to protect the injured abutment.



The second pair of Arches altered into one



Earth well rammed in to spring of Arches

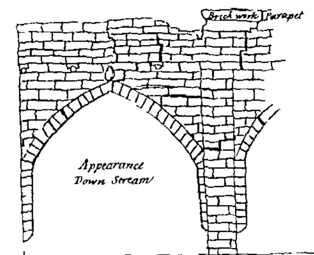
The last four Arches converted into two

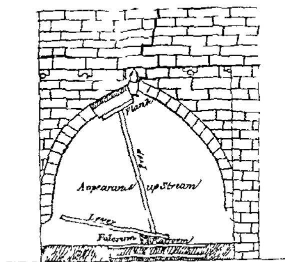
By holding the paper up to the light, this shade shews the embankment thrown up to guard against the rise of the River during progress of the work and to serve as a platform in lieu of Scaffolding.



No 3

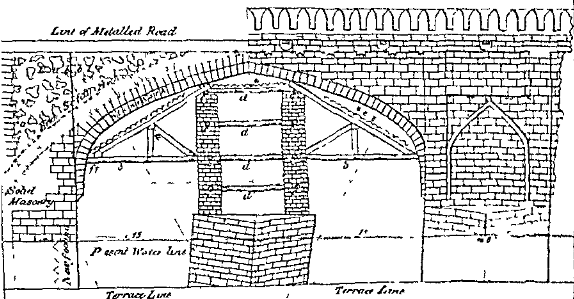
Sketches shewing the injury which occurred upon the breaking up of the Terrace





Nº 4.

PLAN and ELEVATION of centring employed in turning the FIRST ARCH

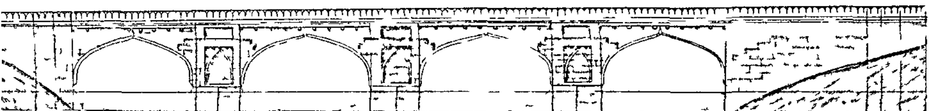


Signed
M C Ormsby
Magistrate

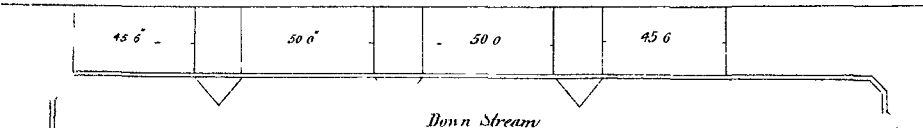
No. 5

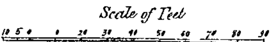
Bridge of Poolgoozur

as restored



Half Plan





(Signed)
M C Ommanney
Magistrate

(Signed)
M Kittoe, Major
Architect

I reported progress to him in a letter, No 340, dated 14th November, 1850, and recommended the application of the principle to the entire structure The entire expenditure up to the stage having been Rs 3,820 13 8, I applied for Rs 4,000 more to complete the entire work Government called for the Commissioner s opinion, which was submitted on the 20th December 1850, and eventually in January, 1851, the Government sanctioned the required sum

In the meantime, I had so far anticipated orders as to have the waterways filled up with well rammed earth, and the work of demolition commenced I was then taken suddenly ill, and compelled to leave for sea The overseer hitherto employed was Ramphul, the Road Committee s mason Mr Gubbins vigorously entered on the work, and placed Mr Stafford to superintend it, and the next two arches were turned, and parapets completed, by the following August The cost of these two arches, and completing the half, according to Major Kittoe s design, was Rs 2,256 15 9½

The entire outlay has been Rs 6,077 13 6 The Bridge is 280 feet long and 35 feet broad, inclusive of parapets, which are each one foot nine inches thick

The following is the estimated amount of work done —

	Stone Work		*Cubic feet*	*Total*
1st	Arch	Feet	55×35×1¾=3369	
2nd	do	do	46×35×1¾=2818	
3rd	do	do	40×35×1¾=2450	
4th	do	do	35×35×1¾=2144	
			——	10781
	Spandrils			
1st	Up Stream,		330× 7×1½=3465	
2nd	Down do		331× 7×1½=3475	
			——	6940
Brick work safety arches of double brick				
1st	Arch		50×32×2 = 3200	
2nd	do,		46×32×2 = 2944	
3rd	do,		40×32×2 = 2560	
4th	do,		35×32×2 = 2240	
			——	1094

Filling behind the shoulders of the arches.		
$245 \times 23 \times 4 =$		31360
Towers at the wings.		
$37 \times 30 \times 3 =$		3330
Parapets.		
1st. $294 \times 4\frac{1}{2} \times 1\frac{3}{4} =$	2315	
2nd. $331 \times 4\frac{1}{2} \times 1\frac{3}{4} =$	2606	
	——	4921
Guard Room.		
2 Walls 20 each $40 \times 12 \times 2 = 960$		
2 Do. 24 do. $48 \times 12 \times 2 = 1152$	2112	
Floor of ditto,	192	
Roof and terracing,	384	
	——	2688
Footing to Eastern abutment.		
$14 \times 4 \times 35, =$		1960
		——
Grand Total, Cubic feet, ...		72924

Casting fractions out of account, the rate per 100 cubic feet will be Rs. 8-5. For stone-work, the Executive Officer's rates are Rs. 30 the 100 cubic feet; and, therefore, I trust Government will be satisfied with the account rendered of our stewardship.

From 1847 up to the end of January, 1,61,876 convicts have been employed, the cost of whose labor would be Rs. 15,145. A very great proportion of the work has been executed by prisoners. They made four lakhs of bricks, dug all the lime kunkur, did all the hard manual labor, including the work of demolition,—the heaviest of all; and hence this great public work has been executed at so small a cost to the State.

Mr. Stafford, our overseer, has, by the orders of Government, 27th October, 1851, received a well merited gratuity of Rs. 500.

Justice to the head mason, Ramphul, who was exclusively employed, under my supervision, in executing the most difficult and treacherous part of the bridge, compels me

here to notice the very important part he took in the work He showed the way, and I trust his great services may be acknowledged

I should hardly have ventured to undertake so great a work, could I not have relied, in any difficulty, on the willing and estimable services of Major Kittoe, superintending the building of the new Benares College To his exquisite taste, the public is indebted for the permanency of a structure of the utmost importance in a commercial point of view In enlarging it, the original character has been maintained, while two thirds of increased waterway, beyond the original amount, having been added, there is every reason to believe that it will remain for years a monument of his genius. Whenever [illegible] and his particular duties permitted his doing so, he came over, and during my absence last year his visits were more frequent, and he directed the work by [illegible] the European overseer

No. 9.

BRIDGE OVER THE OOJHLA NULLAH, WEST OF THE TOWN OF MIRZAPORE

Letter dated 2nd June 1852, from E A READE, ESQ, *Commissioner of the Benares Division, addressed to the Secretary to Government, North Western Provinces*

SIR,

At the request of Major Kittoe, I have the honor to transmit his address to you, No 40, dated 28th ultimo, with a report on the bridge constructed by him over the Oojhla Nullah, a short distance west of the town of Mirzapore

2 A report of this undertaking was submitted through the Sudder Board of Revenue, under date 23rd July 1851, No 187, for the purpose of eliciting the confirmation of Government to the arrangements made on account of the land appropriated under Regulation I, 1824 for the approaches to the bridge, and the sanction of Government was conveyed in Mr Secretary Thornton s letter No 3169, dated 5th September following

3 The bridge itself has been completed entirely from Major Kittoe s design under the supervision of the Local Agents, principally Mr W E Money and J B Higginson the delicate operations having been reserved till such time as Major Kittoe could leave the principal work on which he has been employed at Benares and visit Mirzapore

4 The shops, however, on the approaches, I should remark, are not yet completed They are progressing under Mr Money's superintendence, but I imagine there will be no flanking towers This is immaterial The *opus operandum* has been the bridge It is complete, and has borne a severe test, for, it should be remarked, that, on the occasion referred to in the concluding part of Major Kittoe's report, a large portion of the Grand Trunk Road on the opposite side of the Ganges was swept away

5. Whatever difference of opinion there may be as to the style, or the principle of its construction, the Oojhla bridge is undoubtedly a great public improvement, and promises to be lasting.

No. II.—*Letter dated 28th May 1852, from* MAJOR M. KITTOE, *Architect, Benares College, addressed to the Secretary to Government, North Western Provinces.*

SIR,

I do myself the honor to forward the accompanying Plans and Report upon the new bridge lately constructed from my design and under my superintendence, and at the expense of Mahunt Pursaram Geer, over the Oojhla Nullah at Mirzapore.

2. The importance of this work may be considered great in several points of view. First, in the utility of the bridge itself, being over a dangerous watercourse, intersecting one of the greatest thoroughfares in the vicinity of the city of Mirzapore; being on the high road to Allahabad, Rewah and Sirsa, not to mention its connecting the town of Bindachul, to which thousands flock daily. Next, in the successful result of an experiment, as regards the construction of bridges, after a plan to which, I believe, I may lay claim of being the originator: one by which a great saving of expenditure is effected, and stability ensured.

3. I have forwarded two sets of plans; the smaller for your office, and the larger for submission to the Hon'ble the Court of Directors: should His Honor the Lieutenant Governor see fit to accede to my request that they should be so forwarded.

4. I have to remark that as yet the bridge-head and shops are only in course of construction; the Mahunt seeming undecided as to furnishing requisite funds. I should

here mention that the outlay on the bridge itself barely amounted to thirty-five thousand rupees, being five thousand above the original estimate, which however was framed for a less quantity of masonry than has been found requisite.

No. III.—*Report on the Oojhla Bridge by* MAJOR M. KITTOE, *Architect.*

In the early part of 1848, after the Right Hon'ble the Governor General Lord Hardinge had visited Mirzapore, and had conferred dresses of honor and letters of compliment upon some of the wealthy and public spirited native merchants, on account of the elegant buildings in their own style, with which they had adorned the city, I chanced to go with Mr. Wigram Money, to see the old fort of Kuntet, near Bindachul (Vindhyachur), and had to cross the great *Oojhla* Nullah, which debouches into the Ganges above the town.

2. The banks are precipitous, and their descent and ascent very steep and dangerous; and during the rains the road was often closed for days on account of the violence of the torrent, by which hundreds of lives were formerly lost. The whole of the drainage of the country from the foot of the hills, for miles round, passes through this outlet, and comes down sometimes instantaneously and carries every thing before it.

3. I suggested to Mr. Money the great advantage of a bridge. He asked me if I considered it practicable; which I did. He told me that many years ago, Rs. 88,000 had been given by a native gentleman for that purpose, but that the Engineer Officers consulted, pronounced a masonry work to be impracticable, and wished to have a suspension bridge, which the native refused to subscribe to as perishable.

4. Mr. Money, ever ready to promote useful undertakings, asked me to put my ideas on paper. We went some way up the nullah examining the banks both above and below. A sheet of country paper was sent for and a reed-pen and ink. I made a sketch of the banks and nullah, and measured the span at a convenient spot, and then sketched a bridge of three arches, little differing from the present structure.

5. I subsequently, at Mr. Money's request, prepared a small colored drawing and gave a rough estimate; and in less than a week from that date Mahunt Pursuram Geer had promised to build; and had placed Rs. 10,000 at our disposal. We at once commenced operations and carried them on under the superintendence of an old European pensioner, as overseer, and under the care of Mr. Money, Major Stewart, Mr. C. Hamilton and other gentlemen who took a lively interest in the work, which I visited as often as was necessary to instruct as to the course of operations; and thus has this great structure been carried on to completion.

6. There are few undertakings in this world that are carried through smoothly, and without difficulties of some kind or another. Many are indeed projected, but are either stopped short at the very commencement, or at a more advanced stage; and such are the constant and unforeseen changes in this land of sickness and uncertainty, that it may be considered wonderful any thing ever reaches completion. Our work now under review has not been an exception to the general rule. However, "all's well that ends well," and the greater the obstructions, the greater the satisfaction in having overcome them.

7. My first operation was to dig trial shafts in each bank, which were sunk twenty-five feet; in fact twenty-three below the mud and water-mark of the dry season, and many under the lowest fall of the Ganges, distant 200 yards more or less. A stiff clay, with branches of

blue kunker interspersed, was found uniformly to this depth, therefore there was no apprehension on account of the abutments and of the eastern pier We dug our foundations to 17 feet below the water mark, and posited our first course on the hard clay The western pier, however, had to be carried deeper, as the clay was not as firm at the same depth We had but little difficulty as the water was easily baled out with baskets and well buckets and the clay being so firm generally that the slips were few Our material, I should remark, has been stone and kunker lime throughout

8 Our work was exceedingly easy up to the spring of the arches, a height of 42 feet from the level of the lowest water mark and above the foundation, which, as I have shown, averages 17 feet lower,—total 59 feet to the spring of the arches the spread up and down stream being 44 feet, and sideways 15 feet

9 The piers and abutments are built on the batter, with 5 inch off sets at every 10 feet, and half an inch in the foot batter The first three steps, counting from the foundation, upper course (which is 16 feet) are 10 each (as stated above), and the fourth 12 feet, with no batter, except to the cut waters At this level the ribs spring from skewbacks cut out of solid blocks of stone

10 The arches of this bridge are segmental, pointed, the radius of the arcs being 56 feet, the versed sine or rather rise, being near one third or 15 feet for the two side arches of 50 feet span each, and 20′ for the centre arch, which is 60 feet span The construction of these arches is one of the peculiar features of this bridge

11 I will here digress to explain that in 1845, when Executive Officer on the Grand Trunk Road at Sherghattee, I projected several large bridges, larger than had yet been attempted in this country, which, though not favorably received by the Superintendent, were sanctioned by the Military Board This sanction gave me confidence. I

had already arched three large bridges; two strictly according to Major Willis's plan of centering, and one partly on his and partly upon a modification which circumstances suggested and rendered necessary, though disapproved of at the time by that Officer. I attended personally on each work in succession, and took careful and minute notice of every thing of the effect of each plan. For, being opposed to such earthen centerings as Major Willis made, I was desirous of being able to show that my aversion was founded on something more than mere caprice and idle theory. What I observed convinced me of the unsafe nature of pure earthen centerings in general, and of an almost equal uncertainty with such wooden framings as at best could be made in this country, except at an enormous expense of time and labor, with still the certainty of the effect of the climate on them. This effect might possibly ruin a work, such as a bridge with arches of large span, which would, under most favorable circumstances, require more than half a month to turn the arches. For, the most seasoned timber and the soundest work will assuredly be affected by the climate, and shrink and cast and cause the arches to crack above the spring, and further forward, more or less, according to the dryness of the season. On the Trunk Road in particular, where time was an object, the necessity for some safe plan became the greater. I therefore gave the subject deep thought.

12. I first of all introduced a new plan of construction by which either the whole or parts of a great bridge might be arched without danger; for, although the theory is that, as the stability of a bridge depends upon its abutments, it is necessary to secure all the piers in their position by the centering, and to turn all the arches at one and the same time, or at least not to remove the centerings till all are locked and the pressure secured on the abutments, I found that the practice was somewhat different from the theory. There were causes which operated in

modification In all works these may be few or many To watch, discover and meet these, is the great requisite for an Executive He who merely goes to work, book in hand, depending alone on that, will find himself often in embarrassment

13 The plan I allude to was that of dividing the whole span to be bridged into several divisions, and constructing larger piers of sufficient strength, and of such form as to enable them to act as abutments in themselves, to sustain the pressure of the separate portions For instance, the span of the Mohunna torrent was 539 feet from abutment to abut ment at the spring of the arches, of which there were seven of 65 feet span each, with a versed sine of one fifth, their shape being plain segmental I divided this space into three portions, the centre of three, and the sides of two arches each The smaller spiers which were (like the large) battered, measured ten feet at the top, the large piers 12 feet, and the stirlings or cut waters had a much greater spread, being more acute at their base and gradually de creasing up to the level of the springs (or skewbacks) from whence they assumed an octagonal form, the same as those of the Oojhla, as in plan No I *

This plan proved perfectly successful, though it had a severe trial, both as to time, heavy floods, and the clumsy proceedings of the inexperienced persons employed after I was removed, and whose names now figure on a stone tablet† as the builders of the bridge, a fact I feel it due to myself, thus publicly to put on record I must here add, that the piers and abutments up to the springs of the

* *Vide* Appendix

† MOHUNNA BRIDGE, 1848
BUILT
UP TO SPRINGS BY
Mr G THOMAS *Overseer*
ARCHED AND COMPLETED BY
Sergeant F BOYCE, *Sappers and Miners*

arches were executed for the most part under my immediate supervision, and it was in preparing for the arching that the idea of ribbed arches, such as I have constructed in the Oojhla, occurred to me; and it was my intention to have done my best (though opposed) to try the experiment in the nine-arch bridge I had designed for the upper Baraka, near Burhee, where I had opened a quarry of an excellent stone well suited for the experiment.

14. For turning the arches of the Gowarric bridge, the piers of which had been already built by Lieut. Beadle, when Assistant to Major Willis, I tried and successfully, to meet the evil of the contraction of both wooden and earthen centerings, by turning an arch of a single brick over the surface of the first moulds, and that too, with unburnt bricks, over which I put a thin coating of good cement to gauge more easily and to prevent indentation and consequent irregularity of the intrados of the arches (which were of rubble masonry), by their sinking into the wetted clay. For the Mohunna, I had prepared burnt bricks for the same purpose, as the unburnt bricks would not have answered, intending to turn an arch of 1½ feet (one and a half brick) over my lower centering. It was then I conceived the idea of constructing ribs of cut-stone which were to be turned one by one on a firm frame which should be loosened and shifted from place to place; a single frame might thus serve for the whole bridge. I had but two doubts to trouble me, and they were: 1st,—The possible consequence of the pressure when the arches should have been carried up for about one-third of the way; 2ndly, whether the ribs would be strong enough in themselves to sustain the pressure till the arch being turned above them should be locked, and the strain thus finally removed. The result of the experiment tried on the Oojhla bridge, has shown that, with proper precautions to meet these difficulties (which were not imaginary) the theory as well as the practice has been correct.

15. I now proceed to explain both.

In the three arches turned, three different kinds of centerings were used; the circumstances being different in each foundation requiring such. The western opening had the solid bank upon which two rows of battered piers of *cutcha pucka* work were raised, strengthened with transverse bars of wood, built into the pillars and jammed firm against the pier and abutment. Some larger and stronger timbers were placed on the level of the springs of the arch, and diagonal layers were set, upon which a mud and brickwork form was made. Over this an arch of one and a half brick was turned (say fifteen inches), on the back of which again a thin coat of cement was well laid and gauged to the form of the arch, and lines for placing the ribs were marked off. Upon this the ribs were at once fitted. They are formed of cut-stone voussoirs, 24 inches deep and 22 inches wide, and averaging 8 inches thick, with their lower edges chamfered. The four ribs being locked the arching commenced with large slabs of stone, averaging in length 2′ to 2′ 4″ in breadth and 4″ thick; the outer stones projecting near two feet beyond the outer ribs, and the outer edges of the voussoir being chamfered the same as those of the ribs. The chamfering of course was a mere matter of ornament. Every alternate voussoir on the outer face was in length only to the centre of the rib, so as to break joint; the next stone coming in the same course inwards, reaching from the centre of the outer rib to the centre of the space between the second and the third rib, counting inwards, the remainder of the work breaking joint in a similar way.* By this means the work became thoroughly bonded together, without the use of destructive iron clamps. The same plan was followed in all three arches, the stones being only roughly dressed. In the Western or first arch turned, the overseer disre-

*Plan No. IV, Fig A.

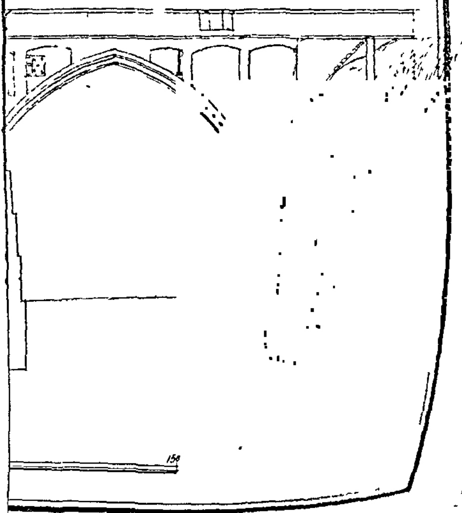
garded my instructions to use great care in bringing up his courses of masonry on both sides at the same time, and as near equal as could be, and to load the crown of the ribs with heavy stones placed on a platform of timbers, &c. He ran up the eastern half somewhere near 15 feet, when, as a natural consequence of unequal pressure, the arch opened a little above the spring, and the ribs were thrown up*; for, I should here observe that through the dryness of the weather the centering had contracted and parted from the ribs full ¾ of an inch generally, and at the point even more †. They pressed on the east side, and but for the firmness of the props and construction of the centering, the arch would have been destroyed and the pier possibly thrown out of the perpendicular. I was sent for and took measures for remedying the evil. I stopped work at the east side and turned the west to a greater height; taking care also to see the platform put up well laden with stones. By degrees the arch resumed its proper shape, and was finally locked without further accident. The arch had cracked at the haunch and the centre voussoirs were opened.

16. In turning the eastern arch more attention was paid to my instructions. The centering had contracted considerably, so that the ribs were parted from it. The loading on the crown was not quite sufficient, consequently three voussoirs on either side the key-stone opened about ¼ of an inch or less each, and a slight crack showed itself at the haunches; no more than the natural consequence of the compression of the voussoirs of the ribs and a consequent depression or lessening of the rise. No sooner were the key-stones driven than the crack at the haunch closed. I will here mention that I always build up a portion of the spandrils so as to be able to keep a constant supply of lime-water flooded. This not only

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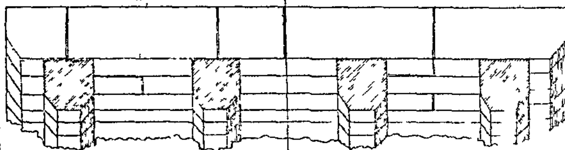
* Plan No. IV, Fig. B. † Plan No. IV, Fig. C.

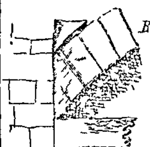
Bridge.

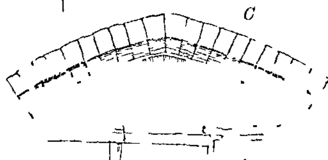


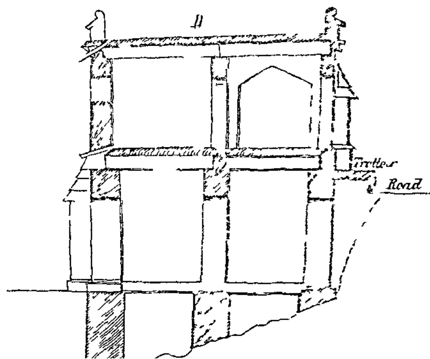
No IV

OOJHLA BRIDGE
Miscellaneous Sketches









prevents the work drying too quickly, but the lime water fills in to all crevices, and by crystallizing adds greatly to the strength

17 By the time these two arches were completed and work well on upon the great centre arch, (for the ribs of which, wooden frames* of heavy saul timber were made under my own eye at Benares and sent to Mirzapore) the rains set in and the river began to rise However, I felt great confidence in my contrivances, and by this time the obstinate and conceited old man who had objected to my plans as new fangled, was dismissed for insolence and insubordination, and an active, steady, willing lad put in his place, a young soldier (a pensioner on account of his wounds) a person who pretended to no knowledge, and was content to do as he was bid, and that most cheerfully With this young man s help our work progressed famously, and soon ended in the most satisfactory manner Mr Bromley paid the greatest attention to all instructions and showed the lively interest he took in this ticklish under taking, by constant care and by taking daily (even more frequently) notes of the effects produced Not a crack of any kind showed itself, either in the ribs or at the hunches The platform was loaded, and the load added to when the slightest flaw was fancied As the two sides of the arch approached the centre, the load was decreased by using the stone for the building, and thus this grand and interesting experiment was carried through The ribs may here and there barely have touched on the centerings, but there could have been no pressure, as the only props that the horizontal beams at the springs had, were diagonals from the upper off sets of the piers, lashed on with rope

18 Here then was positive proof, first, that unless the crowns of the ribs are firmly secured by loading there would be a tendency to throw up at the centre or point,

* Plan No III

next, that they were sufficiently strong to support the arch when under construction, *i. e.*, to serve as centering, showing therefore that arches of very large span might be thus made, at an immense saving of expense: for it is the centering that costs so much in bridge-building, particularly when there is water, and consequently nothing to support it beneath.

19. It will have been observed that I made my first centering of great strength; indeed I am in doubt whether there were not four rows of piers instead of three, *i. e.*, 16 instead of 12:—I have mislaid my original sketch. My second centering was much slighter and showed me that I could work with a slighter still; indeed, such became absolutely necessary, as the river rising could not allow of props from below, which at any time would have been very difficult and expensive to erect, for the soft mud is many feet deep. On first starting, the old overseer insisted on putting props from below of poles and bamboos, and before they could be removed the torrent came down and carried the whole clean away, even endangering the frames, which were shaken. Scaffolding was the next consideration, and that I managed by throwing out large poles, like the yard-arms of a ship, fastening them on the extrados of the arches, and from the ends of which I had drop-ropes and bamboos, to which a platform pathway of small bamboos was suspended. As the work advanced, these were pushed forward with new suspension drops, &c. A couple of large boats were moored, one above and the other below the bridge, as a provision against accidents, and thus the work went cheerily on; the rise and fall of the river not inconveniencing us, and no accident occurring. So much for the arching.

20. The arching completed, the next point for consideration was the spandrils. These I had previously determined should be hollow. At first I intended to have a cylindrical cavity, but upon reflection it occurred to me

that I could relieve the piers of more weight, and at the same time throw what weight there would be on to the centres of the arches, and perhaps more equally distribute it The solid platform over the crowns of the arches, suggested the idea of their serving as abutments, and by dividing the distance between each into three, and raising a row of piers over the opposite haunches and connecting them at the top with stone slabs, I turned three arches in such manner (by carrying up the lower voussoirs to the level of the keys) so as to form one continuous arch, a kind of brick on edge relieving arch being worked over the whole length, and a coarse terracing of good cement and stone chippings beaten down over the whole Above this the metalling of the road is one foot deep, and a trotoir fifteen inches high by three wide, on each side of solid masonry, which secures the ends of the machicolation brackets, and the machicole upon which the parapet rests, projecting beyond the face of the bridge

21 The chambers thus formed are lighted by the loops on the spandrils and stirling turrets, and are spacious and airy, and may be devoted to many useful purposes The two centre chambers are reached by a Newel staircase in the south turret, and those of the ends by flights of steps on each side and at each end of the bridge

22 The bridge has been open to the public for nearly a twelvemonth, and at the commencement of last rains withstood, without the least vibration, perhaps the severest test it could be put to, namely, a sudden and extraordinary flood from the hills when the Ganges was yet low The water came down in a torrent like the bore, and the fall of water, between the upside cut waters and the lower, was fourteen feet Twenty two large boats moored some little distance below, within the mouth of the nulla, were swept away and destroyed, and many lives are supposed to have been lost The torrent continued flowing for many hours The overseer was on the bridge for the

greater portion of the time and witnessed the sight. Hundreds of people came out of the town in the rain to see what they believed, must either have taken place, or would soon happen, (*i. e.*, the destruction of the bridge,) and after a time returned shouting congratulations.

23. In the plans hereunto annexed, I have shown the rows of shops, flanking towers, and gateways to the approaches of the bridge, which are now in hand, though at one time it was feared that we should not have sufficient funds. We must hope that the entire design will shortly be carried out. The approaches had to be raised to such a height that it became necessary to protect the sides. To effect this a range of buildings, two stories high, have been commenced; the lower opening on to the ground, at its original level, to the rear; the upper opening direct on to the road, above which their floors are raised two feet to the level of the trotoir of the bridge.*

24. The style of architecture throughout is that of the latter part of the fourteenth century (Gothic); the material rubble-stone hammer dressed.

25. I must here conclude with the hope expressed that the bridge may for ages to come withstand all the power that this destructive torrent can bring to bear, and thus prove the value of the experiment of ribbed arches, and the absurdity of the theory, ever put forward by way of discouragement, of such arches not being of a proper shape to withstand severe pressure.

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* Plan No. IV, Fig. D.

No. 10

FLOATING BRIDGES

COMPARATIVE ADVANTAGES OF THE BRIDGE OF BOATS AT DELHI, AND OF THE PONTOON BRIDGE AT AGRA *

GOVERNMENT ORDER, *dated 14th July 1852, communicated by* W MUIR, ESQ, *Secretary to Government, North Western Provinces, to* M R GUBBINS, ESQ, *Magistrate of Agra*

SIR,

The Hon ble the Lieutenant Governor is desirous to institute a comparison between the floating bridges over the Jumna at Delhi and at Agra, of which the former rests on country boats and the latter on iron pontoons Both of these bridges have been maintained throughout the year, for some years past, and they are situated on great lines of traffic near large cities, they afford therefore a good opportunity for comparing the two modes of maintaining a communication across the river

2 You are intimately acquainted with the two localities and with the history of the two structures In 1842-43, as Officiating Magistrate of Delhi, you had charge of the Bridge of Boats there, and as Magistrate of Agra paid much attention to the iron and pontoon Bridge here I am therefore desired to forward to you the annexed† rough statements of receipts and disbursements at the Delhi and Agra Bridges during the years from 1848 to 1851, both inclusive, and to request that you will favor the Government with your opinion on the comparative merits of the two structures You will be able from the records of your own office at Agra, to obtain any further information that may be requisite regarding the bridge at Agra, and Mr A A Roberts, the Magistrate at Delhi will

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* Vide Article [illegible]

† Vide Appen [illegible]

readily furnish you with any particulars you may wish to ascertain regarding the bridge at that city.

3. It is desirable that the two structures be compared with reference to convenience of transit and economy of construction, so far as the experience of the last few years affords grounds for the formation of an opinion.

No. II.—*Report dated 23rd July 1852, by* M. R. GUBBINS, ESQ., *Magistrate of Agra, addressed to* W. MUIR, ESQ., *Secretary to Government, North Western Provinces, in reply to Government Order dated 14th July 1852.*

SIR,

I have the honor to acknowledge your letter No. 2871, dated the 14th instant. Having previously been made aware of His Honor's wish for the preparation of a memorandum upon the comparative advantages of a floating bridge constructed as at Delhi of wooden boats, and of one supported by iron pontoons as at Agra, the subject has engaged my attention for some time past. I beg now to submit the result of my enquiry for the information of Government.

2. The subject naturally divides itself into branches, viz. :—

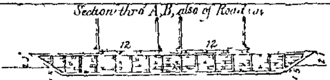
I. Which of the two bridges proves itself to be the best thoroughfare, and least liable to interruption ?

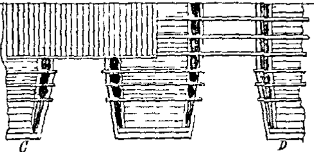
II. Which of the two recommends itself most on the score of economy ?

3. This latter question again embraces two distinct points of enquiry, viz. :—

I. Which of the two bridges as now constructed is the cheapest ?

II. Which of the two would be the cheapest, if either bridge were reconstructed with such improvements as experience has been found to recommend ?







Scale of feet

10 5 0 10 20 30

(Signed) A. A. Roberts, Offg. Magistrate

(Signed) P. Abbott, Major, Executive Officer, Dehlee Division

4 *Lastly*, which is the best thoroughfare? Upon this point a very strong opinion has been recorded by the Committee which sat in 1848 in the concluding paragraph of their report,* in which they have stated that "there is no floating bridge in the country which can be compared to the Agra Bridge for the ease and rapidity with which the passage can be made I incline to agree with the Committee in this opinion, but it must be qualified by the remark that there exists no bridge in the country constructed altogether of Government boats, or in other words of boats of one uniform size But on the contrary as the largest number of Government built boats in any bridge does not amount to one third of the whole,† so boats of different size and tonnage are necessarily hired, and moored together, causing irregularities of ascent and descent in the roadway, which would not be were the boats all of one size I cannot discover any peculiar advantage necessarily attaching to the pontoon construction, as respects ease and facility of passage, superior to what is attainable with boats

5 Viewing the Pontoon Bridge indeed in its present construction and condition, I think a Bridge of Boats has the advantage in respect to rigidity of roadway, which of course is a main point in facilitating passage In this respect the remarks contained in paragraphs 8 and 12 of the Committee's report are no longer applicable Each pontoon now sinks as a weight passes over it, almost independently of its neighbour, besides having a rolling motion, the two together causing, in my opinion, more undulation than there is in a Bridge of boats It will be seen in paragraph 27 of this report, that it is proposed to remedy the defect of the pontoon's rolling by an improved roadway construction, by aid of which, it will, I think,

* *Vide* Printed Selections No 2

† Meaning of course the average number required throughout the twelve months

be altogether obviated; leaving then the inequality of roadway caused only by the depression of the pontoon in the water, to be compared with that arising from the oscillation of the two gunwales of a boat. This comparison belongs to the third division of this enquiry, and will be found in a succeeding paragraph (*vide* paragraph 28).

6. But the more important question involved in this branch of the subject is, which form of construction best secures the passage from interruption caused by the bridge being carried away? In this important point of comparison the experience of the past four years, 1848 to 1851, exhibits little difference between the Delhi and Agra Bridges. Mr. A. A. Roberts, Magistrate of Delhi, informs me (in paragraph 7 of his letter No. 116, dated the 1st instant) that during the four years, 1848 to 1851 inclusive, the passage across the bridge has been only once interrupted, and that was for four days, from the 16th to the 19th February 1851, owing to a sudden rise in the river. I am told that the bridge did not give way, but that several boats had been taken out of it for the sake of economy, the season not being one when much rain is expected; that the river rose suddenly, and access could not be had to the bridge.

7. On the other hand the annexed Memo. F, by Mr. A. F. Mackenzie, (Bridge Engineer at Agra,) shows that during the same period the passage over the Pontoon Bridge was interrupted once only in 1849 for three days, when a part of it was carried away by a number of heavily laden boats running foul of it. Both bridges have been kept up throughout the twelve months of the year. The Pontoon Bridge has been carried away once in four years: the Bridge of Boats at Delhi not at all; if Mr. Roberts is correctly informed as to the cause of the interruption in February 1851, and indeed the season of year at which it occurred appears sufficiently to confirm the account which has been given to him respecting it.

8. But notwithstanding this apparent disadvantage in the experience of the past four years, I think the question must be decided in favor of the Pontoon Bridge, because obviously—

First,—The pontoons offer so much less resistance to the stream from their shape and size than boats do.

Secondly,—So much fewer moorings are needed for a Pontoon Bridge, thereby greatly diminishing the difficulty of getting rid of boats or rafts running foul of it, and which in several instances at Agra, have been carried off by the stream, under the Pontoon Bridge.

Thirdly,—The pontoons admit more easily and safely of being moored by chain cables, whereby security is much improved, and

Fourthly,—They are much more secure than boats against the weather, neither admitting rain nor offering so much resistance to the wind. But further, the current of the river, in freshes at Agra, must necessarily be much stronger than at Delhi, the stream being here compressed into a channel of less than half the width of that left between the two extremities of the new causeway at Delhi. The Jumna, while I am writing is at high flood, but does not measure at the bridge more than 1,200 feet in width. At Delhi, again, where of course there is less water, the river between the east and west causeways is spanned by a bridge composed of 107 boats, and about 90 platforms, which cannot occupy a less width than 2,700 feet. The current has been running here at 7½ miles an hour. At Delhi with a double width of channel, besides a bridge of 7 arches, *adjoining on the west, and with the relief* afforded by the extensive overflow of the country along the eastern bank, the force of the current must be much less. The powers of resistance which have successfully opposed *unequal* forces, cannot of course be considered *equal*.

9. The appended Memo. E, by Mr. A. F. Mackenzie exhibits the system of mooring at present in use for the

pontoons, viz., one chain cable to every fourth pontoon; the greater number of which were obtained only last year. In paragraph 8 of his letter which I have already referred to, Mr. Roberts describes the system of mooring pursued at Delhi, thus,—

"Large stones are deposited in the stream about 100 "yards above the boats, and there is at least one such "stone or anchor for each boat. Two cables of *moonj* "each weighing four maunds, and one cable of two maunds "are attached to this anchor, and made fast to the prow "of the boat. During the rains an additional cable of "six maunds is given to every three boats. Several boats "at either end of the bridge have a long cable running "from their bows, which cable is made fast at some dis- "tance beyond the bank, a little above the bridge; and "there are two iron cables which run the entire length of "the bridge through the bows of the boats. The boats "are further kept together by *moonj* ropes fastened to "each other's bows, and sterns also. The iron cables I "consider a great security in the rains."

On a comparison of the two systems thus described, it is, I think, impossible to avoid the conviction of the great superiority of chain cable moorings over *moonj* ropes,— and the enquiry why the Delhi Bridge of Boats is not supplied with the former. The change would, I think, be advantageous, but it has not yet been tried, and Mr. A. F. Mackenize thinks* would be attended with some risk.

10. I proceed to the second branch of enquiry, viz., the relative cost of each bridge, considered firstly, in reference to its construction. In order to make a just comparison we must consider

I.—THE ORIGINAL COST OF CONSTRUCTION.

II.—THE DURABILITY OF EACH.

III.—THE COST OF YEARLY MAINTENANCE.

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* *Vide* Memo. H, Appendix III.

And, first, I will examine these particulars in respect to

THE AGRA PONTOON BRIDGE

I —*Its original cost of construction*

11 This has been shown by paragraph 27 of the Committee's report to be Rs 1,500 for each pontoon, complete with roadway The annexed Memo A, by Mr MacKenzie shews the average cost of each iron pontoon with proportion of chain mooring, to be *Rs 1,065*, and of each piece of roadway attached to the pontoon, to be Rs 549 The durability and repair expenses of these being very different, it will be necessary to consider them separately

II —*Durability*

12 *Of Pontoon* —Our experience is not sufficient yet, to enable any correct conclusion to be arrived at respecting the durability of so durable a machine as the pontoon Mr Mackenzie, in the annexed interesting Memo C, estimates the age of a pontoon at fifty years Although the assumption of the duration of any perishable engine of this kind at half a century appears at first extravagant, yet considering that I admit a wooden boat to last twenty years with proper repair, and having nothing to impugn Mr Mackenzie's data, I have thought it best to adopt his estimate and assume the pontoon to last fifty years The chain cable will not probably last more than twenty years but the cost of the one in use forms so small a fraction of that of each pontoon, that a separate calculation for it is unnecessary After fifty years Mr Mackenzie estimates the value of each pontoon at Rs 200, but I would not assume it at a higher rate than Rs 100

13 *Of Roadway* —In the annexed Memo D, the durability of the present roadway is estimated at seven years, and its value when condemned, at Rs 6 000, or nearly one sixth of its original cost I have adopted this estimate, reducing the estimated value of the condemned roadway to one eighth of its original cost This is the

troduction by Captain Samuel Brown, of the Royal Navy, in the year 1817* Two great failures of these bridges have taken place one of the chain pier at Brighton, the other, of a bridge at Yarmouth the former was caused by a *violent storm*, the *latter by the rush of a crowd of persons who had assembled on the platform to* witness a boat match, but these disasters can hardly be made the ground of objection to the principle of construction it is, moreover, probable that wire cable bridges of equal strength would have failed under similar severe trials The Menai Bridge, which has bar chains, has several times resisted successfully the most unusually severe strains to which it has been exposed by the vibrations of its platforms and chains during heavy storms I am not aware of the recorded failure of any of the wire cable bridges which have been erected

* Drewry on Suspension Bridges

6 —In the absence of any practical grounds derived from the experience *of existing bridges on which to deduce* a preferential claim in favor of the bar chain or wire cable suspension, I can only venture an opinion on the subject, and have no hesitation in stating that I greatly prefer the former to the latter mode of construction

7 —The tensile strength of iron wire has been proved by experiment to be somewhat greater for its small sections than it would be if deduced from that of bar iron, but there is reason to consider the strength of a cable made up of a number of parallel wires to be less than the combined strength of the wires taken *individually*, and that *within the limits to which iron can be perfectly wrought by hammer or roller*, a single bar *of a given section will* in all probability be stronger than a number of small rods or bars of equal aggregate section laid parallel in a fascicle or cable would be, on this account, therefore, and especially for small bridges, it appears to me that the bar chain bridge has the advantage

8.—It is probably owing to the difficulty of straining alike each of the wires used in making up a cable that their combined strength falls short of the aggregate strength of the whole number of wires employed. The difficulty of effecting this even in the plains, and under the careful superintendence of practised mechanics, is always great; and in the Hills, where most of our Suspension Bridges have been put up, the difficulties would increase, but still (unless for bridges of small span) they would fall short of any attempt to transport ready-made cables from a distance to the spot where required to be set up. The task, too, of getting wire cables up into their places is known to be one of great labor and difficulty.

9.—In bar chains two lengths of links only are generally necessary, *viz.*, one set for the upper or suspension links, the second for all other links of the chain. These may be moved with ease and fitted indiscriminately to any part of the curve*; a very ordinary amount of care only is required to put the parts together, and this may, under usual circumstances, be done from the opposite standard heads, and the junction effected by simply mechanical appliances.

10.—Bar chains are also more easily protected from the effects of the weather than wire cables; all parts of the former being accessible to the application of anti-corrosive pigments, which is not the case with any but the outside wires of a cable.

11.—On the above reasons, I would beg to state for the information of the Hon'ble the Lieutenant Governor, N. W. P., that I consider the construction of bar chain Suspension Bridges generally preferable to those of wire cable, and would recommend them, especially where the localities to be bridged may be in the Hills.

12.—In conclusion, I beg to state that in this letter reference is made to ordinary bar chain bridges with

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* The upper links of course excepted.

vertical drop bars, and that Suspension Bridges on Dredge's principle or Goodwyn's resultant tension construction have not been considered, the former being in my opinion practically objectionable, and the latter as yet of too limited application to admit of a correct judgment being formed of its efficiency. I may mention, however, that a bridge of 120 feet span on Goodwyn's resultant tension principle over the Kalee Nuddee at Gokulpore, near Meerut, was re-adjusted by me in 1848, since when it has borne the heavy traffic between Gurmooktesur and Meerut, and that up to the present time it has required only ordinary petty repairs, and has completely satisfied the requirements of the public convenience at all seasons of the year.

Bridges in the North Western Provinces

Annual Repairs.							Total.
Roadway.				Coal Tar.	Masonry and Painting.	Plaster.	
Wood work.	Iron work	Flooring.	Total on Roadway.				
40 0 2	25 9 11	0 0 0	74 10 1	284 1 6	0 0 0	0 0 0	358 11 7
4592 8 5	0 0 0	0 0 0	4592 8 5	714 6 9	0 0 0	89 12 0	5306 11 2
0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
97 6 0	92 3 9	0 0 0	189 9 9	59 6 9	173 1 7	0 0 0	422 2 1
52 11 5	0 0 0	0 0 0	52 11 5	61 14 8	0 0 0	0 0 0	114 10 1
32 10 2	0 0 0	0 0 0	32 10 2	63 3 6	0 0 0	0 0 0	95 13 8
525 14 3	135 11 10	463 0 10	1124 10 11	66 15 0	10 4 1	0 0 0	1201 14 0
364 11 4	0 0 0	12 7 5	377 2 9	66 8 0	0 0 0	0 0 0	443 10 9
336 12 5	0 0	0 0 0	336 12 5	37 13 3	0 0 0	0 0 0	374 9 8
201 3 1	0 0 0	0 0 0	201 3 1	56 15 9	0 0 0	0 0 0	258 2 10
97 9 6	0 0 0	0 0 0	97 9 6	67 12 0	15 7 10	0 0 0	180 13 4
0 0 0	8 4 11	61 6 4	69 11 3	67 11 8	0 0 0	0 0 0	137 6 11
47 0 2	0 0 0	0 0 0	47 0 2	71 2 0	11 12 10	0 0 0	129 15 0
218 12 0	180 10 0	133 3 9	532 9 9	60 3 6	661 5 10	0 0 0	1254 3 1
180 0 4	0 0 0	0 0 0	180 0 4	67 11 0	0 0 0	0 0 0	247 11 4
37 10 2	0 0 0	0 0 0	37 10 2	43 11 1	0 0 0	0 13 8	82 2 11
4 12 0	0 0 0	0 0 0	4 12 0	10 6 0	0 0 0	0 0 0	15 2 0
0 0 0	9 6 0	0 14 6	10 4 6	2 7 7	0 0 0	0 0 0	12 12 1
0 0 0	0 0 0	0 0 0	0 0 0	66 13 0	78 2 4	0 0 0	144 15 4
0 0 0	0 0 0	0 0 0	0 0 0	538 6 5	0 0 0	0 0 0	538 6 5
0 0 0	0 0 0	0 0 0	0 0 0	122 10 7	0 0 0	0 0 0	132 10 7
0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6838 9 5	457 14 5	671 0 10	7961 8 8	2510 4 0	950 2 6	90 9 8	11542 8 10

III.—*Statement shewing the Suspension Bridges in the North Western Pro*
for Renewals

Names of Bridges.	Description.		Dimensions.		*Year of erection.*	Cost.		
	Standard.	*Floor.*	*Length.*	*Breadth.*				
Bareilly, ...	0	0	0	0	0	0	0	0
Iron, at Nuwabgunge,	Stone.	Wood.	200	25	1847	24030	3	7
Futtehgurh, ...	0	0	0	0	0	0	0	0
At Khodagunge, ...	Stone.	Wood.	467	14	1836	50000	0	0
Almorah, ...	0	0	0	0	0	0	0	0
Iron, over Bulleeah river, ...	Stone.	Wood.	180	6½	1831	2656	11	9
Over the Khyrna at Ramgurh, ...	"	"	80	6	1829	944	0	0
Over Kunnie river, ...	"	"	110	6	1830	1953	0	0
At the junction of Kunnie river, ...	"	"	110	7½	1853	3545	2	1
Over Surjoo river, ...	"	"	150	6½	1831	3845	10	0
Over Ramgunge do., ...	"	"	120	6	1832	2208	0	0
Over Surjoo, at Ramnesur, ...	"	"	180	6	1830	4209	0	0
Over Sewal, at Beshesur, ...	"	"	120	6	1831	2536	1	7
At Hawal Bagh, ...	"	"	110	6	1830	2111	9	5
Over Sewal, at Chowsallee, ...	"	"	90	6	1833	1650	4	5
Over Kossillah, at Jyaree, ...	"	"	180	6	1846	10543	0	0
Over Kullee, at Jul Ghat,...	"	"	140	6	1838	5332	1	0
Over below Jyaree or Kossillah, ...	"	"	150	6½	1842	5609	4	8
Over Khyrna at Mujhera, ...	"	"	150	6½	1842	5768	1	2
Over Loohoo, at Loohoo Ghat, ...	"	"	100	6½	1852	1566	3	5
Gungaree, District of Allygurh, ...	"	"	220	14	1843	30387	0	10
Bussaie, in the Hills,...	"	"	80	16	1840	0	0	0
Over Kallee Nuddee, Gurhmooktesur river,	"	"	139	16	1845	16517	0	0
Hindun, ...	"	"	487	16	0	12993	0	0
	"	"	"	"	"	188405	5	11

inces, their description, cost, and the percentage on the original cost and Repairs

Percentage on Renewals and extension Repairs			*Percentage on annual Repairs*			*Percentage on petty Repairs*			*Total on Percentage*			*Number of Years*	*Average per year.*		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2	8	1	7	11	0	6	5	5	1	0	9	0	9	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	6	6	10	12	8	0	7	9	14	10	11	20	0	11	9
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	6	1	15	14	1	3	11	8	110	15	10	25	4	7	0
124	10	11	12	2	11	19	7	10	166	5	8	27	5	12	8
73	1	11	4	14	8	7	14	11	85	15	6	26	3	4	11
140	3	6	33	14	10	2	2	9	176	5	1	3	58	12	4
78	8	9	11	8	9	0	0	10	90	2	4	25	3	9	8
74	8	0	16	15	9	0	3	8	91	11	5	24	3	13	2
12	5	8	6	2	1	0	4	2	18	11	11	26	0	11	6
115	2	11	7	2	2	10	8	5	132	13	6	25	5	5	0
82	3	11	6	7	9	6	15	4	95	11	0	26	3	10	10
79	12	2	7	14	0	11	8	3	99	2	5	23	4	5	0
52	5	1	11	14	3	0	13	8	65	1	0	10	6	8	1
55	12	8	4	10	5	0	15	7	61	6	8	8	7	10	11
10	7	9	1	7	4	0	15	8	12	14	9	14	0	14	9
0	0	0	0	4	2	0	0	0		4	2	14	0	0	4
0	0	0	0	13	3	0	0	0	0	13	3	6	0	2	2
0	0	0	0	7	7	0	0	8	0	8	3	13	0	0	8
0	0	0	0	0	0	2	15	7	2	15	7	16	0	2	11
40	5	6	3	4	2	0	3	9	43	13	5	11	3	15	9
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1037	8	0	158	2	9	69	12	11	1265	7	8	351	114	8	4

COTTON.

No. I.

INFORMATION REGARDING THE CULTIVATION OF COTTON IN THE NORTH WESTERN PROVINCES.

From the Secretary, Sudder Board of Revenue, to the Secretary to Government, North Western Provinces, (No. 470,)—Dated Allahabad, the 24th June 1862.

SIR,—In reply to the orders of Government, in the General Department, dated the 30th September last, No. 2578 A, I am directed by the Sudder Board of Revenue to state, for the information of the Honorable the Lieutenant Governor, that the questions regarding the Cotton crops in these Provinces were circulated in November last, and the replies have reference to the crop then on the ground; that is, the crop sown in the end of June 1861, and gathered towards the close of that year.

2. An abstract of the replies is enclosed. Three of the reports are forwarded in original,* as containing information of interest.

* From Collector, Allygurh.
From Collector, Banda.
From Deputy Commissioner, Jaloun.

3. In regard to the average yield per acre, a great variety of statement will be observed—the estimate ranging from six maunds of uncleaned cotton as low as two; and for cleaned cotton, from 1 maund 35 seers, down to 30 seers, and even less. This is partly to be accounted for by the various yield of different soils, rendering it difficult to strike an average; and partly by the fact that cotton, especially in the South-Eastern parts, is often sown along with another crop (as *Arhur, Til*, &c.,) and therefore what is represented as the outturn of an acre may be only part of the crop grown upon it. Perhaps the following estimates may be taken as near the truth, *viz.*, uncleaned cotton, from 4 to 6 maunds; cleaned cotton, from $1\frac{1}{3}$ to 2 maunds.

4 In cleaning the cotton, two thirds of the material in weight is separated as seed, &c The seed (*benoula*) is used for feeding cattle, and fetches from 13 annas to 1 rupee per maund

5 The market prices for cleaned cotton vary from 9 and 10 Rupees per maund in the Western districts to 12 and 13 Rupees in the Eastern In the following table an average rate of Rs 11 a maund has been assumed, and an average rate of produce, ordinarily at 1½ maund of cleaned cotton per acre

6 The districts of Dehra, Kumaon, and Gurhwal are omitted, the cultivation being confined to a few hundred acres for local consumption The Benares Division is also omitted The crop as a staple for export is unknown, it is only occasionally sown (mixed generally with other crops) for domestic use The sole exception is in one Tuppah of Mirzapore (Oproudh, between the river Beylun and the Rewah hills), where 3,000 acres grown with cotton are said to yield some 24 seers per acre Cotton is not cultivated in Goruckpore

Division.	District.	Roughly estimated area under Cotton. Statute acres.	Estimated yield of clean Cotton. Maund of 80 lbs.	Value at local market rate. Rupees.	Remarks.
		Acres.	*Maunds.*	*Rs.*	
Meerut.	Seharunpore, ...	23,750	35,750	3,93,250	A portion exported to the Punjab, and a portion Eastward.
	Moozuffernuggur, ...	17,000	25,500	2,80,500	About three-fourths exported Eastward.
	Meerut, ...	30,000	54,000	5,94,000	From one-half to three-fifths exported Eastward.
	Boolundshuhur, ...	15,000	25,000	2,75,000	Two-thirds exported Northward and Eastward.
	Allygurh, ...	1,65,000	2,00,000	22,00,000	The area is probably over estimated; about 1,57,000 maunds are exported, chiefly Eastward.
	Total, ...	2,56,750	3,40,250	37,42,750	
Rohilkhund.	Bijnore, ...	23,000	34,500	3,79,500	One-half exported Eastward.
	Moradabad, ...	27,500	42,000	4,62,000	One-half exported to Kumaon and Eastward.
	Budaon, ...	52,500	78,500	9,63,500	Three-fourths exported, chiefly Eastward.
	Bareilly, ...	30,000	50,000	5,50,000	All consumed within the district, which imports a considerable amount for further consumption.
	Shahjehanpore, ...	8,000	8,000	88,000	Insufficient for its own consumption.
	Total, ...	1,41,000	2,13,000	24,43,000	

Agra.	Muttra,	68,000	90 000	9,90,000	Collector estimates at only 80 000 maunds, of which about 63,000 are exported Eastward
	Agra,	73,826	1,00,000	11,10,000	About three fourths exported Eastward.
	Etah,	26,000	39,000	4,29 000	About three fourths sent Eastward
	Mynpoory,	19,000	28,500	3,13,500	A considerable portion exported Eastward
	Etawah,	47,000	70,000	7,70,000	Three fourths exported Eastward
	Furruckabad,	10,000	15 000	1,65,000	About half is exported North and East
	Total,	2,43,826	3,42,500	37,77,500	
Allahabad.	Cawnpore,	63,000	90,000	1,00,000	About three fourths exported into Oudh and Eastward
	Futtehpore,	24,000	30,000	3,30,000	Two thirds exported Eastward
	Banda,	89,000	60,000	8,80,000	Estimate of yield low, because hardly ever sown alone About seven eighths exported Eastward
	Allahabad,	27,000	27,000	2,97,000	About three fourths are exported to Calcutta, Jounpore, Goruckpore, &c.
	Total,	2,03,000	2,07,000	16,07,000	

Division.	District.	Roughly estimated area under Cotton. Statute acres.	Estimated yield of clean Cotton. Maund of 80lbs.	Value at local market rate. Rupees.	Remarks.
		Acres.	*Maunds.*	*Rs.*	
Jhansie.	Lullutpore, ...	2,000	0	0	Grown for Home consumption. Yield estimated at only 10 seers the acre, probably because mixed with other crops.
	Jhansie, ...	28,000	28,000	3,08,000	There is so extensive a carriage of cotton, grown in Independent States, through Jhansie, that the Deputy Commissioner finds it difficult to estimate the proportion of his own crop, which follows the same course.
	Jaloun, ...	40,000	35,000	3,85,000	The Deputy Commissioner has not estimated the area. The settlement tables of Calpee shew 14 per cent. of cultivated area under Cotton, and on this the present estimate is founded.
	Humeerpore, ...	38,500	34,000	3,74,000	The Collector estimates the yield at only 31 seers per acre, probably because it is sown with other crops.
	Total, ...	1,08,500	97,000	10,67,000	
	Grand Total, ...	9,53,076	11,99,750	1,26,37,250	

7 The subjoined table shews the proportion which the area under Cotton bears to the whole cultivated area, excepting the Jhansie Division, of which the cultivated area is not yet ascertainable with exactness

Division	Cultivated area by last Survey	Area under Cotton in 1861 62
	Acres	Acres
Meerut	4 029 142	2 56 750
Rohilkhund	4 132 002	1 41 000
Agra	3 174 823	2 43 826
Allahabad	3 198 620	2 03 000
Total	14 764 587	8 44 576

Thus out of 14½ million of acres under crop, about 8,50,000 are cultivated with cotton, that is, about $5\frac{5}{7}$ per cent

8 The estimated aggregate out turn of clean Cotton (including the Jhansie Division) is twelve hundred thousand maunds, equal to 96 millions of lbs, or 8 57,000 cwts Of this probably one quarter is consumed in the districts in which it is grown, one quarter or somewhat less is exported to the north and east for local consumption, and one half is carried eastward towards Calcutta, but what proportion is destined for eventual exportation by sea there is no means of finding out Besides this, there is a constant stream of carts passing through Bundlekhund northwards to the Jumna with cotton from the Independent States in Bundlekhund, Gwalior, &c The statistics of this trade could, if necessary, be checked at the Ghats on the Jumna

9 A statement of the market rates for Cotton at the chief marts in these Provinces, from the beginning of 1859 to May 1862 compiled from the monthly prices current, is enclosed It will be seen that the prices range higher in

proportion as you go lower towards Calcutta. The universal tendency likewise is for the rate to rise till June, when, in the prospect of a good harvest, it suddenly falls, to rise again after the crop has been absorbed in the market.

10. It may also be gathered that the prices current are mainly ruled by the plentifulness or scarcity of the local harvest. The average rates in 1859 were beyond all comparison higher than they have been since, even with all the urgency of the European demands. Cotton fetched that year from 15 to 22 Rupees a maund.

11. And herein lies the difficulty of persuading the people to extend their Cotton sowings. Accustomed to great and constant fluctuation in the market rates, they have learned by immemorial experience not to regard the rate which prevails at the time of sowing as any index of what it will be when the harvest is gathered in. The home demand exercises but a vague and inappreciable influence upon the crops. It has long ceased to be *felt* directly by the people. It is lost in the far larger influence arising from the local yield being good or bad.

12. There was a time when it was otherwise. The traditions of the Company's investment still linger among the inhabitants of Calpee and Humeerpoor. In the former district,* "the purchases of Government amounted at one period to forty lakhs a year, and of private individuals it is said to 18 lakhs; since 1830, the former have been discontinued, and the latter have dwindled down to an annual expenditure of barely seven lakhs."

* Mr. Muir's Settlement Report, paragraph 34, written in 1842.

13. What was thus done by the Hon'ble Company in its trading days must now be done by the merchants of Lancashire, and a permanent supply to any extent will then be secured. So long as this is not done, the fluctuation of prices in Europe however high they may temporarily raise the market rate, will produce little effect upon the breadth of land brought under the Cotton crop.

14 The effect of the dealings of the Commercial Residency in Bundelkhund are even now traceable there* Agents, deputed from Mirzapore, still visit the district and make advances to the zemindars and cultivators at the time of sowing In Banda,† the traders sometimes buy up the crop as it stands, and clean it Elsewhere, the cultivators ordinarily sell or barter their cotton to the village bunnia, who disposes of it in the nearest market, or they part with it to brokers, as in Allygurh. The village price by buying direct from the cultivator, is stated to be six or eight annas a maund, (from one shilling to one shilling and six pence per cwt) lower than the local market price The system of advances to cultivators, or the bespeaking of a crop, seems (excepting in Bundelkhund) to be little known

15 How different would have been the state of things from what we now find them, if Agents from English Houses had been posted in the best Cotton tracts in these *Provinces*,‡ if they had held direct transac tions with the cultivators, or even with their brokers, and if *thus a constant* demand and steady price had been brought to bear upon the production of Cotton? The influence of the European market, which is now hardly, if at all, perceptible in regulating the sowings, would then have told in the most direct and powerful manner

16 The example of Calpee must also be followed in the location of Cotton screws at such Agencies Unless

* See Major Ternan's Report

† Mr Carpenter's Report.

‡ There are some very pertinent remarks on this aspect of the case in an Art on Cotton culture in India in the *Ed nburgh Review* for April last — Now the Cotton interests at large have had it in their power, as they still have it, to place themselves in concert with these classes of prac tical agriculturists to say what they want and to obtain it at a fair market price dependent upon quality Suppose the case had been otherwise suppose Agencies to have been established in all … intel … wo ild … e has

(COPY)

ABSTRACT of Replies to Board's Circular, No. E, E, dated 11th November 1861, regarding the probable out turn of the Cotton Crop

Superintendent Dehra Dhoon, No. 412, dated 17th December 1861.—Cotton cultivation is scattered over the whole of the district; it is certainly not more than 200 acres in the whole of the Dhoon and Jounsar Bawur, and the exact quantity cannot be ascertained The average produce is 5 maunds "Kupas" per acre in the Dhoon, and 2 maunds per acre in Jounsar Bawur. The cotton cultivated is for the special consumption of the sower, and the district is supplied by importations from the plains The climate and soil are unfavorable to its growth, and its cultivation is considered unremunerative.

Officiating Collector, Seharunpoor, Demi Official, dated 7th December 1861.—23,761 acres are devoted to cotton cultivation. The average produce per acre is 2 maunds 28 seers; value at market rate Rs 8-8 0 per maund, and the estimated proximate value at this rate of the entire cotton is Rs. 5,45,309. It is spun into thread, and also used for quilted clothing for the cold weather, some of it being exported to the Punjaub and down country, but to what amount is unknown. The usual time for sowing cotton is in June, after the first fall of rain, and the period for gathering commences from September to November The crop is an annual one, and is never allowed to remain for a second or third year

Collector of Moozuffernugger, No 2, dated 25th January 1862.—About 17,000 acres are devoted to cotton cultivation, the total cultivated area of the district being about 6,25,000 acres. The average yield is about 2¾ maunds* per acre, the average rate being assumed to be Rs 2 8 0 per maund† It is estimated that two-thirds go to waste in giving, and one third, called "Rooee,"

* Cleaned Cotton

† For uncleaned Cotton

the bales are screwed on the spot, the carriage must continue to be slow and expensive. It is understood that unscrewed Cotton cannot be transported at a profit by the Railway. It is needless in this place to advert to the benefit that would accrue from the quality of the Cotton, and its freedom from impurities, being checked by an agent *on the spot.*

17. Cotton in these parts is invariably sown towards the end of June or beginning of July, on the first setting in of the rains. If the commencement of the rains be deferred, the sowings are postponed and the crop suffers. If the delay be very great (as unfortunately does sometimes happen) the crop is lost. Any long suspension of rain between July and September also seriously injures its growth. Such contingencies would of course have to be borne in mind by English speculators in the Establishment of Agencies. The crop is gathered from the latter part of October to the beginning of January. The early pickings are the best. The plant is invariably an annual, but (in reference to the question put by Government) it is stated that, when allowed to continue in the ground for a second year, it still bears at the same period.

18. It occurs to the Board that valuable information regarding the Company's Cotton investments in Bundelkhund might be obtained from the old records of the Hon'ble East India Company prior to 1830. The mode of procedure in effecting purchases, the extent to which advances were resorted to, and (a serious point) the degree in which famine or drought affected the investment of the year, might probably be copiously illustrated from those records.

I am, &c.

G. H. M. BATTEN.

Secretary.

rain, when it is gathered from the middle of October to the end of December The crop is an annual one, and is by no means allowed to remain standing beyond the end of the year

Collector of Allygurh, No 5, dated 31st January 1862 —The total number of acres appropriated to cotton is 1,65,392, and the average produce per acre is 1 maund, 6 seers, 6 chittacks, the market rate of which is Rs 10 5-0 per maund The estimated proximate value of the entire crop at the above rate is Rs 19,63,046 The quantity exported to other Districts, *viz*, to the markets of Mirza poor, Cawnpoor, Furruckabad, Kassgunge, &c, is estimated at 1,56,573 maunds of the material, leaving 8,819 maunds for home consumption The sowing commences in June or July, just as the rains set in, and the harvest gathered from October to the end of December, the crop being an annual one always The Collector recommends that a supply of MacArthy s gins of £ 3 value, say ten for each of the cotton growing districts, be procured at Government expense and let out to zemindars or merchants who may be induced to try their efficiency

Officiating Collector of Bijnour, No 378, dated 19th December 1861 —About 22,328 acres are devoted to cotton cultivation in the Districts, the produce per acre at an average is three maunds of seed, and one maund 20 seers of cotton The cotton sells at Rs (9) nine per maund, and the seed at one maund eight seers per Rupee, thereby giving a return of Rs 13 8 0 per acre on the cotton, and Rs 2 8-0 per acre on the seed, showing the total value of the whole cotton Rs 3,01,428, seed 55,820, Rs 35,74,248 The seed is nearly all consumed in the District Of the cotton, about one half is used in the District, and half exported—mostly to Dhanourah and Chundowsee, in the Moradabad District, from whence it finds its way to Futtehgurh, Cawnpoor, and Mirzapoor through the hands of the large traders The end of June or commencement

is mostly exported in various districts, chiefly Mirzapoor. The price of cleaned cotton is five seers per Rupee. The crop is sown in June, and is picked in November or December; it is invariably annual.

Collector of Meerut; No. 1, dated 3rd January 1862.—The total amount of land under cotton cultivation is 36,172 acres.‡ The average produce per acre is about 1 maund 20 seers, making the total out-turn 54,258 maunds; the market rate at present is 4 seers 6 chittacks per Rupee, but it may be assumed at Rs. 7 per maund or 5¾ seers per Rupee, which would show the crop of the district to be worth Rs. 3,79,806. About one-half or three-fifths of the cotton yield are exported to the eastward, immense quantities being sent to Mirzapoor. The seed generally sown is in the last ten days of June and first ten days of July, and the gathering begins in the first week of November, when it is collected invariably almost once a week, and the whole gathered in January. The crop is an annual one, and the plant is never allowed to remain on the ground after it has been gathered.

‡ Tehseel	Meerut,	...	5,513
,,	Haupper,	...	7,065
,,	Barauta,	...	7,957
,,	Ghazeeabad,	...	7,331
,,	Sirdhana,	...	5,097
,,	Moyranna,	...	3,209
		Total,	36,172

Officiating Collector of Boolundshuhur, No. 97, dated 21st December 1861.—About 15,000 acres of land are assigned to cotton cultivation. The average produce of "Rooee" (cleaned cotton) is 2 maunds per acre, of "Kupas" (cotton with seed in it) 6 maunds per acre; value at the market of the former is Rs. 10 per maund, of the latter Rs. 2-8-0; estimated proximate value at this rate of the entire crop in the district is, cleaned cotton Rs. 3,00,000; kupas Rs. 2,25,000. Of this about one-third is retained for home consumption and two-thirds are exported to Chundowsee (Moradabad), Hatras, (Allygurh), and Mirzapoor. The usual and best period for sowing is at the end of June, and the beginning of July, after the first fall of

Officiating Collector of Budaon, No 1, dated 30th January 1862 —From 50 to 55,000 acres are devoted to cotton cultivation Average produce per acre of uncleaned material about 4½ maunds, that of cleaned cotton 1 3rd or about 1½ maund The market value of the latter article ranges from 8 to 12 Rupees per maund, according to the supply and demand The estimated proximate value of the out turn of 55,000 acres of cotton, valued at 8 Rupees the maund, will give Rs 6,60,000 at the higher rate of 12, Rs 9,90,000 at the mean of those two prices, or 10, Rs 8,25,000 About one fourth of the season s crop is retained for local consumption and for transport to immediate neighbouring Districts where the supply is less The rest all finds its way down to Mirzapoor, *vid.* Futtehgurh The latter end of June or beginning of July, after the first fall of rain, is the time for growing, and the picking commences early in October The crop is always an annual one

Collector of Bareilly, No 13, dated 11th January 1862 —About 30,000 acres are devoted to cotton cultivation, the average produce per acre being 7 maunds 32 seers with seeds, and 2½ maunds without them, value 26 Rs at Rs 10 6-0 per maund, showing a total value of the entire cotton of the district to be Rs 7,78,125 The cotton produced is not sufficient to provide for itself, supplies are received from other districts The period for sowing cotton is July in every year, and it is gathered in November and December, the crop being usually an annual one

Collector of Shahjehanpoor, No 1, dated 21st January 1862 —Nearly 8,000 acres are assigned to cotton cultivation The average produce per acre is about 22 seers, the market value is 3¼ seers per Rupee, making the value at this rate of the entire crop to be Rs 54,150 It is not sufficient to meet the consumption of the district The period for sowing is June and July, when the harvest

of July is considered the best period for sowing cotton, as the crop is usually gathered in October, and is an annual one always.

Officiating Collector of Moradabad, No. 537, dated 20th December 1861.—In the Khurreef season, in the month of Assar, is the cotton cultivated; it is collected in October and November, and is an annual crop.

Tehseeldarees.	Land devoted to Cotton cultivation in Acres.	Produce of Cotton per Acre.	Rate of Cotton.	Total Value of Cotton.	How disposed of.
		Mds. S.		Rs.	
Moradabad, ...	5,000	1 0	10 Rs. per Md.	(a) 50,000	(a) About two-thirds is used by the local inhabitants, and one-third exported to Chundowsee.
Sumbhul, ...	3,500	1 0	9 do.	(b) 31,500	(b) Partly used by the local inhabitants, and a portion exported towards the east.
Billaree, ...	5,000	2 10	10 do.	(c) 1,25,000	(c) About 14,000 maunds are exported to Furruckabad and Mirzapore annually, out of the local produce and imported supplies.
Amroha, ...	5,000	1 13	8 do.	(d) 53,000	(d) All used in the pergunnah.
Hussunpoor, ...	4,500	2 6	8-8 do.	(e) 77,400	(e) All used within the district, except 1,000 maunds exported for traffic.
Thakoordwarah,	4,500	1 30	9 do.	(f) 70,875	(f) About 3,000 maunds are exported to Bareilly and Kumaon; the rest is used within the district.
Total, ...	27,500	0 0	0 0	4,01,775	

gurh, Muttra, Julleisur, and Soub, or send it to Agra or Hattrass, from whence the cotton is forwarded on to Ghazeepoor and Mirzapoor. The period for sowing is invariably the commencement of the rainy season, in the month of June. Its gathering begins early in October to *the end of December, though the tree continues bearing* till the end of February As the plant is annual, it is generally in succession to a rubbee crop A large portion of the district is peculiarly well adapted for the cultivation of the plant, while the more valuable crops, such as Sugarcane and Indigo, cannot be grown on account of the brackish water, which materially assists in producing a fine cotton harvest The Collector is of opinion that advances from capitalists, with instruction in the method of cleaning cotton, would rapidly induce cultivators to devote a very large area to this crop.

Collector of Furruckabad, No 126, dated 20th March 1862 —9,931 acres are devoted to cotton cultivation The average produce per acre is 1 maund, 19 seers, 5 chittacks, the market price being 3 seers, 15 chittacks for the Rupee, or Rs 14 13 0 per produce of each acre The estimated proximate value of the entire cotton crop is Rs 1,49,675 2 5. A large quantity of the cotton is used in the district itself, some of it being exported to Oude, Shahjehanpore, and Cawnpore The whole produce of the district may be estimated at 14,734 maunds, of which perhaps 7 000 maunds are exported The best season for sowing is in the month of June, the cotton is gathered in December and January, the crop being always an annual one

Collector of Mynpoory No 22 dated 21st February 1862 —19,048 acres, 2 roods and 24 poles are devoted to the cotton growth The average produce per acre of cleaned cotton is 64 seers, valued at Rs 16, and the total estimate out turn of the crop, at this rate, Rs 2,74,768 It is usually exported to Cawnpoor, Shahgunge, Furruckabad and Ghazeepore, and is frequently sold in great quantities.

takes place from October to December; the crop being always an annual one.

Senior Assistant Commissioner of Kumaon, No. 7, dated 10th January 1862.—The cotton cultivation may be roughly estimated. Almorah Tehseel, 600; Kumaon, 30; and Bhabur, 100 acres. Total 730 acres. About 4 maunds of uncleaned cotton are yielded by each acre, which will produce about 1 maund of cleaned cotton. It has scarcely any definable market value, the small quantity grown being almost entirely for home consumption. About 3 seers per Rupee for cleaned cotton may be taken as a fair average, which would show the value of the entire crop about Rs. 9,700. From the Bhabur a very small quantity of cotton finds its way through bunneahs of Casheepoor, Juspoor, &c., to the weavers of the Rohilcund Towns. It is sown at the commencement of the rains, and gathered from October to December; the crop is an annual one.

Senior Assistant Commissioner, Gurhwal, No. 202, dated 26th November 1861.—No cotton is grown in the district, the small quantity consumed being imported from the Plains. Wool and hemp are used in lieu of it.

Officiating Collector of Muttra, No. 160, dated 11th December 1861.—During the present year (1861-62) 68,272 acres have been devoted to cotton cultivation. The average produce in the district is about 1 maund 7¼ seers per acre. The market rate of cleaned cotton may be assumed at 8 Rs. per maund, although the present price (in consequence of the supposed large demand) is about Rs. 8-8-0 per maund. The entire crop at this rate may be estimated at 80,645 maunds, which would assign a value of about Rs. 6,85,482, or at the average, Rs. 8 per maund, Rs. 6,45,160. Of the usual crop, 62,953 maunds are exported beyond the confines of the district, and about 17,727 maunds retained for home consumption. In the villages, as a rule, the bunneeahs purchase cotton, and sell it either to larger dealers in the towns of Koosi, Sher-

entire crop of 78,750 maunds, Rs. 10,23,750. About one-fourth of the crop is consumed in the district, and the remainder is exported to the marts of Shahgunge in Oude and Mirzapoor, of which about one-third goes to the former, and two-thirds to the latter thus—district consumption, maunds 19,687; Shahgunge, maunds 19,687; Mirzapoor, maunds 39,376. The cotton is sown in the latter part of June and first half of July, and is gathered in December. It is an annual crop.

Officiating Collector of Futtehpoor, No. 29, dated 27th January 1862.—24,700 acres are devoted to the cotton growth, and the average produce per acre is 26 seers, 11 chittacks. Its value at market rate is Rs. 12-6-7, showing the estimated proximate value of entire crop to be Rs. 2,04,785. About one-third is consumed in the district, and two-thirds exported to Mirzapoor, &c., in the East. The season for sowing is that of Assar or July; that for collecting from October to January. The crop is an annual one.

Collector of Banda, No. 1295, dated 27th November 1861.—Cotton cultivation extends over 89,022 acres. The yield per acre varies considerably in amount, and the want of a fixed standard of weight throws increased difficulties in the way of forming a satisfactory estimate, but probably 25 seers per acre will be a fair estimate. The rate also changes from year to year in different parts of the district, for in obtaining a maund of clean cotton the charges are Rs. 12-8 to Rs. 13 as a fair market price, which may be taken under ordinary circumstances. The estimated value of the entire crop at this rate would be Rs. 7,23,307. Of this total out-turn about seven-eighths is exported, and the rest remains for district consumption. *The principal cotton marts in the district are*—Banda itself; Goegowlee, in pergunnah Pylanee; Gookhea and Bissenda, in pergunnah Seonda; Kallinger and Orun, pergunnah Budousa; and Rajapoor in pergunnah Cheeboo.

But as a mart for cotton, Banda has of late years greatly declined and been superseded by Rajapoor, through which place probably three-fourths of it exported passes. The sowing takes place in the month of Assar or July, commonly after the first fall of rain. The ground is manured if the ryot can afford it, and ploughed only once or twice, when it is weeded (not watered) while the crop is springing up, during August and September and beginning of October; the gathering takes place after this to the end of December, and the crop is always an annual one, fresh seed being invariably sown. Cotton cultivation in the different pergunnahs is as follows:—

Name of Pergunnah.	Total cultivated area in acres.	Cotton cultivation in acres.	Percentage of cotton cultivation on cultivated area.
Banda, ...	1,44,703	8,759	6·07
Pylanee, ...	1,46,083	9,750	6·6
Ougasee, ...	1,35,463	8,298	6·1
Seonda, ...	1,05,712	5,634	5·2
Dursenda, ...	1,24,269	14,779	1·2 nearly
Cheeboo, ...	97,011	9,947	1·02
Tirohan, ...	78,578	17,297	2·2 nearly
Budousa, ...	1,20,837	14,528	1·2
Total, ...	9,55,552	89,022	9·3

Collector of Allahabad, No. 20, dated 11th January 1862.—About 27,000 acres are devoted to the cultivation of cotton:—

Trans-Jumna, ...	22,900
Doab, ...	4,000
Trans-Ganges, ...	100
	27,000

The average produce of each acre is nearly 2 maunds 6 seers, and its market rate about Rs 12, thus making the estimated proximate value of the entire crop to be almost Rs 3,24,000 A small portion of the cotton yield is retained for home consumption, and the rest exported as follows —

Calcutta,	75 per cent
Jounpoor,	10 „ „
Goruckpoor,	5 „ „
Ghazeepoor,	5 „ „
Oudh,	5 „ „

The period for sowing is July or the commencement of the rains, when it is gathered from the middle of October to the end of November, except that "Radhea," another description sown at the same time with "dhal" ("Urhur") is not reaped till the June following Although this cotton is little in quantity, its quality is superior The crop is an annual one, and never allowed to remain standing for a second or third year

Collector of Goruckpoor, No 27, dated 19th November 1861 —No cotton is grown in the district

Collector of Azimgurh, No 529, dated 20th November 1861 —There is no regular cotton cultivation in the district A ryot may now and then rear a few plants for his own use, but there is no such thing as a field or any trading connected therewith carried on

Collector of Jounpoor, No 31, dated 23rd December 1861. —The district is not a cotton growing one, an acre of land scarcely being devoted to its cultivation, except that it is sown with "Urhur" or round the edges of fields, and of an inferior quality called "Munnooa" From 2½ to 10 seers per acre is all that is procured It sells at 6 annas per seer in the bazar or Rs 15 per maund It is all consumed in the district and mostly made up into cloth for the cultivators by either village or itinerant weavers The crop is sown in June, in the commencement of the rains,

voted to the cotton growth. The amount of produce may be estimated (when the rains are plentiful) at 70,000 maunds, and the average produce per acre as follow:—

Seed,	...	...	...	10	lbs.
Produce, cotton raw,	...	...	...	320	lbs.
Ditto, spun,	...	...	...	80	lbs.
Rubar next in richness to Koonch and Jaloun, yields per acre Cotton raw,...				240	lbs.
Ditto, spun,	...	...	...	60	lbs.

Purwah, another good description of sandy soil, requires irrigation, when it produces abundantly. Yields—

Cotton raw,	...	...	..	160	lbs.
Ditto spun,	...	...	...	40	lbs.

The heat in the district is very intense from 1st April to 15th October; the rainy season sets in at the end of June (when the plant is sown) and continues to the 1st of October. The cotton growth would be greatly extended if European agency, European energy, and European capital were brought into the market. About 20 per cent. is the probable consumption of the Natives, and the rest available for export. It is bought up generally by agents from the large Native firms at Mirzapoor, who depute men to make advances, to the cultivators at the sowing time, when in January and February the cotton is got and taken to Calpee, and from thence shipped by boats to the above place. The price in the gathering season for cotton (clean) is Rs. 10 to Rs. 12 the maund, and at the beginning of November, before the new crop is produced, it runs up to Rs. 15 and Rs. 18 for 80 lbs.

Deputy Commissioner of Jhansie, No. 439, dated 15th March 1862,—27,215 acres are devoted to cotton growth. The produce is from 1 maund to 1½ maunds per acre, and sells at Rs. 10-8 per maund. The value of the crop of the district is therefore about Rs. 2,69,419. The cotton is consumed in the district itself. The time for sowing is the end of June and beginning of July, and that for gathering the

end of October and December. The crop is always an annual one.

Deputy Commissioner, Lullutpoor, No. 82, dated 22nd March 1862.—About 2,000 acres are devoted to cotton cultivation. The average produce per acre is about 1 maund of uncleaned and 10 seers of cleaned cotton. The cotton produced is used in the district itself. The best time for sowing it is in the early part of the rainy season, that for gathering during the months of October, November, and December. The crop is an annual one.

Collector of Humeerpoor, No. 1001, dated 20th December 1861.—38,400 acres are devoted to cotton cultivation. The average produce per acre is 30¾ seers; value of which at market rate is 11½ Balashace Rupees the maund, which is nearly 9 Rupees, and the estimated proximate value of entire crop Rs. 3,45,600. About one-third is disposed of in making clothing, &c., and the remainder exported to Mirzapoor, Shahgunge, *via* Banda or Calpee. The sowing of the crop is usually in Assar, in the month of July, and the gathering from the end of October to the close of the year, the crop being an annual one.

I am, &c.

G. H. M. BATTEN,

Secretary.

(COPY)

From Collector of Allygurh, to Secretary Sudder Board of Revenue, North Western Provinces, Allahabad, (No. 5,)—Dated Camp Vinser, the 31st January 1862.

SIR,—As requested in your Circular Order, No. E, E, dated the 11th of November 1861, I have the honor to append the information called for respecting the Cotton crop of this season in this district, and for convenience of reference, I have embodied it in a tabular form.

2. The total area cultivated with cotton is set down at 1,65,392 acres, the average rate of produce per acre 1

maund 6 seers 6 chittacks, and the average selling rate during the past month at Rs 10 5 0 per maund, derived from the existing rate of each Tehseelee

3 The estimated proximate value at the above rate of the entire Cotton crop is Rs 19,63,046 Of this, however, 1,56 573 maunds are given as the estimated amount exported to other districts, valuing Rs 16,14,659, and leaving only 8,819 maunds, or about a little more than 5 per cent of the whole produce for home consumption

4 The figures shewn must be taken merely as a rough approximation, the Cotton merchants and brokers of the principal marts in the district supplying the Tehseeldars with such information as they possess regarding the probable out turn and amount likely to be exported

5 It will be seen that nearly 95 per cent of the entire supply proceeds eastward, and mainly to the markets of Mirzapoor, Cawnpoor, Furruckabad, and Kassilgunge

6 The Cotton sowing commences in the months of June and July, early or late, according to the time the rains set in, and the harvest is gathered accordingly from October to the end of December on the cob bursting, and thereby shewing the cotton to be ready for picking

7 The crop of this part of the country is an annual one, no produce resulting on the plant being allowed to remain a second year With the kind known as [illegible] ma, the plant, I am told, realizes something the [illegible] year, but " Narma is not sown in this dist[illegible] I imagine, being unsuited to it

8 In addition to the above information [illegible] been called for by the Board, I beg to [illegible] remarks which may be of use, touching [illegible] Cotton cultivation as pursued in th[illegible] ing the state of the present season [illegible] those of the past two years

9 There is only one sort of C[illegible] trict, known as " Bunn kupa[illegible]

I[illegible]

by native brokers to be better, from being whiter and cleaner, than the produce of the other districts in the Meerut Division realizing 8 annas per maund more.

10. The American variety is neither grown nor known in the district; no foreign seed is introduced, but the indigenous seed is re-sown. With this seed the people are satisfied; but in it we have full evidence of the poorness of the fibre produced; and in the degenerating effect of repeatedly using the same seed on the same soil, we see the real cause of the least value attached to Indian Cotton compared with other Cottons in use in England, as demonstrated in the photographs circulated by the Manchester Cotton Supply Association for exhibition to cotton-growers in this country.

11. Doubts have been entertained by some Natives of the advantage derivable from the cultivation of the American Cotton; the merchant looks to the amount of profit to be gained by it. The American kind is thought to be lighter in weight than the country-grown Cotton, and the amount produced to be about the same or less in both, hence an apprehension of less profits arising from the lighter quality. But this fear is unfounded. There is a general ignorance on the merits and capabilities of the American Cotton. If the Native capitalists could be only convinced by practise that the American quality, if *only equally* productive with the country-grown, would fetch higher prices, there is little doubt of their being induced to adopt it.

12. In a good year the highest out-turn is stated to be nearly 4 maunds per acre on good ground, and an average crop of about 3½ maunds per acre: hence it will be seen that the crop of the present season has been far short of an average one. This has been caused, I am told, by the excessive rain that fell last year, the moisture not admitting the soil to be properly cleared of grass and weeds, whose consequent exuberance checked the

growth of the Cotton plant and affected materially the yield of Cotton

13 The sale of Cotton in this district is conducted chiefly through native brokers, the system of advances to the cultivator, as pursued with Indigo, is resorted to but little

14 Without irrigation from wells or canals, the plant is not produced and preparing and manuring the land is necessary to promote healthiness When Cotton is purchased from the cultivator direct, it may be had 6 or 8 annas per maund cheaper than in the market

15 This district is singularly fortunate in the channels it possesses for the export of Cotton, having two roads connecting Coel, its central town with the Ganges, one of which is metalled throughout and the other for nearly half its extent, two metalled roads communicating with Mattra and Agra, and the Jumna River, and another unmetalled, the Grand Trunk Road intersecting it, east and west, and the Ganges Canal running north and south, with its two branches striking off at Nanoun, on the Trunk Road, towards Cawnpore and Etawah

16 The cost of carriage to Ramghat on the Ganges, 26 miles from Coel, was in 1860 two annas per maund, to Furruckabad by the Trunk Road, 6 annas, to Cawnpore, 8 annas, and to Mirzapoor, 14 annas

17 At the beginning of the past year (1861), the carriage was cheaper, being the same to Ramghat, but two annas less to both Furruckabad and Cawnpoor, and three annas less to Mirzapoor The difference in the costs of the past two years is ascribable to the fuller development of commerce, and the call for carriage ceasing for Military purposes, as compared with former years since the disturbances of 1857

18 The hope of increased profits—founded on the knowledge of the Cotton supply in Europe being cut off by the war in America, and stimulated doubtless by the

by native brokers to be better, from being whiter and cleaner, than the produce of the other districts in the Meerut Division realizing 8 annas per maund more.

10. The American variety is neither grown nor known in the district; no foreign seed is introduced, but the indigenous seed is re-sown. With this seed the people are satisfied; but in it we have full evidence of the poorness of the fibre produced; and in the degenerating effect of repeatedly using the same seed on the same soil, we see the real cause of the least value attached to Indian Cotton compared with other Cottons in use in England, as demonstrated in the photographs circulated by the Manchester Cotton Supply Association for exhibition to cotton-growers in this country.

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growth of the Cotton plant and affected materially the yield of Cotton.

13. The sale of Cotton in this district is conducted chiefly through native brokers, the system of advances to the cultivator, as pursued with Indigo, is resorted to but little.

14. Without irrigation from wells or canals, the plant is not produced, and preparing and manuring the land is necessary to promote healthiness. When Cotton is purchased from the cultivator direct, it may be had 6 or 8 annas per maund cheaper than in the market.

15. This district is singularly fortunate in the channels it possesses for the export of Cotton, having two roads connecting Coel, its central town, with the Ganges, one of which is metalled throughout and the other for nearly half its extent; two metalled roads communicating with Muttra and Agra, and the Jumna River, and another unmetalled, the Grand Trunk Road intersecting it, east and west, and the Ganges Canal running north and south, with its two branches striking off at Nanoun, on the Trunk Road, towards Cawnpore and Etawah.

16. The cost of carriage to Ramghât on the Ganges, 26 miles from Coel, was in 1860 two annas per maund; to Furruckabad by the Trunk Road, 6 annas; to Cawnpore, 8 annas; and to Mirzapoor, 14 annas.

17. At the beginning of the past year (1861), the carriage was cheaper, being the same to Ramghât, but two annas less to both Furruckabad and Cawnpoor, and three annas less to Mirzapoor. The difference in the costs of the past two years is ascribable to the fuller development of commerce, and the call for carriage ceasing for Military purposes, as compared with former years since the disturbances of 1857.

18. The hope of increased profits—founded on the knowledge of the Cotton supply in Europe being cut off by the war in America, and stimulated doubtless by the

promulgation last year of the State Paper informing native Capitalists and the public of the present state of the Cotton trade—has been the means of extending the cultivation of Cotton considerably in excess of past years.

19. The cultivation in 1859 is stated to have been 1,83,000 pucka beegahs, more or less equal to 1,04,212 acres, and the cotton yield some 3,66,000 maunds; and in 1860, the cultivation amounted to 51,500 pucka beegahs, or 29,297 acres, yielding some 51,500 maunds of cotton.

20. The above comparative results demonstrate one fact, that little certainty can be placed on either the Returns of the extent of cultivation or the amount of produce reported, the average rate of yield per acre being recorded as two maunds in 1859, one maund in 1860, and one maund six seers six chittacks in 1861. Allowance, however, should be made for the extreme drought of 1860, which rendered futile in many instances the attempts to obtain a crop; whole fields might be seen bearing short, stunted plants with little or no cobs upon them. The previous year was more favorable in every respect, hence the larger rate of produce given; and in 1861, the very heavy rains operated to diminish the supply on an extended area, hence the variable feature in the rate of produce per acre.

21. Connected with this subject is the disapprobation of European Cotton spinners of the Cotton cleaned in this country. The "churka" is the only machine in use by Natives for this purpose. For simplicity and cheapness, it would be no easy matter to find a substitute that would clean and separate the cotton from the seed better, and its general use from time immemorial would throw difficulties in the way of its substitution by any other machine among a people so attached as the Natives of India are to the *modus operandi* of their forefathers.

22. It would be very desirable to introduce into the country a simple Gin on the M'Carthy principle, whose

price, as shewn by the Cotton Supply Association in their Secretary, Mr Haywood's, Statement of December 1859, would easily come within the means of Native Capitalists*, but as one man will clean some 20 seers of Cotton a day with the "churka," the Gin, to supplant the "churka" should be of such size as will prove remunerative The smaller size priced at £1 10s by the Cotton Supply Association, would be useless, its daily out turn per man being set down at 15 or 24 lbs according to the weight of the staple The Native would in preference, then, stand by his churka

23 I would propose that a supply of M'Carthy's Gins of £3 value each or more, say ten for each of the Cotton growing districts—be procured, at the expense of Government in the first instance, and let out on moderate terms for the first year or so to such zemindars or merchants who may be induced to try their efficacy I feel confident they would all be sold within a short time, and Government be re imbursed its primary expenditure, for it should be borne in mind that that man would command the market whose goods would be the first ready for sale

24 I trust I shall be pardoned for going at length into this subject, and exceeding the limits of the Sudder Board's enquiries The extension of Canal Irrigation is engaging the attention of Government for the greater development of the resources of the country, and each year [illegible] with improved finances, we may expect to see [illegible] thus brought under cultivation The greater the [illegible] ragement afforded by Government by introducing [illegible] and European Machinery, the more safely may [illegible] upon a larger amount of Cotton produce [illegible] might be effected without in any way interfering [illegible] principles of free trade

I have, &c

J H [illegible]

[illegible]

* Or some such Gin as has been experimentally introduced by the Agri Horticultural Society Bengal

STATEMENT of Cotton produced in Zillah Allygurh, during the year 1861-62.

1. No.	2. Name of Tuhseel.	3. Lands cultivated with Cotton.	4. Average rate of Cotton produce per acre.	5. Selling rate per maund in December 1861.	6. What things are generally made by Cotton.	7. District to which it is generally exported.	8. How much exported to other districts.	9. The best months for sowing Cotton.	10. When Cotton is gathered from the fields.	11. Remarks.
		Acres.	Mds. Srs.	Rs. A. P.			Mds.			
1	Coel,	77,482	2 0	10 4 0	Native clothing, padding of quilts, quilts for cold weather, tents, floorcloths, ropes, tape, listing for beds, &c.	Mirzapoor, Cawnpoor, Furruckabad.	1,16,223	In June or July, on the first fall of the periodical rains.	From the middle of October to end of December, or early in January, according to the lateness of the plant in ripening.	
2	Hattrass, ...	14,750	1 10	9 12 0						
3	Eglass, ...	10,000	1 0	10 0 0	Do. do. do.	Mirzapore, &c. or Eastern Provinces.	15,000			
4	Tuppul, ...	5,800	0 25	10 0 0	Do. do. do.	Do. do.	3,200			
5	Attrowlee, ...	7,200	1 5	10 4 0	Do. do. do.	Coel.	1,000			
6	Akrabad, ...	33,500	1 20	11 0 0	Do. do. do.	Khasgunge, Mirzapore.	8,400 2,500			
7	Secundra Rao, ...	4,660	0 21	11 0 0	Do. do. do.	Mirzapore.	2,250			
8	Khyr, ...	12,000	1 10	10 4 0	Do. do. do.	Do. Eastern Provinces.	8,000			
	Total, ...	1,65,392	1 6	10 8 0			1,56,573			

ALLYGURH COLLECTORSHIP,
The 31st January 1862.

J. H. PR

From the Collector of Banda, to Secretary to Sudder Board of Revenue, N W Provinces, Allahabad, (No 1295,)—Dated Camp Lukkhunpoor, the 27th November 1861

Sir,—I have the honor to forward, for the perusal of the Board, a Memorandum of answers, as regards the present year's Cotton crop, to the questions contained in your Circular No L, F, of the 11th instant Observing from a newspaper that these questions had been circulated by the Punjab Government, I sent them to the different Tehseeldars, and the information thus obtained has been carefully collated and embodied in the annexed Memorandum by Mr Carpenter, Officiating Deputy Collector Owing to the enquiry being novel, I will not vouch for the accuracy of the figures given for the Cotton cultivation area, but I hope to be more sure of the results next year

I have, &c ,
H W DASHWOOD,
Collector

MEMORANDUM

Question I —How many acres, roughly calculated, are devoted to Cotton cultivation in each district?

Answer —From recent enquiries, it appears that in the present year, the total number of acres in the district cultivated with Cotton is 89,022 The area of the district in acres is 19,20,302 At this rate, therefore, about 4½ per cent of the whole area of the district is cultivated with Cotton The extent of cultivated land in the district is 9,.,.22, Cotton, therefore, occupies rather more than 9 per cent of the whole cultivated land But this percentage varies in different parts of the district, the per-

Dursenda
C el oo
Tirohan
Budousa

gunnahs named in the margin producing both absolutely more Cotton than the remaining pergunnahs of the district, and more relatively to their size This will be seen clearly from the annexed Statement In Tirohan Cotton occu

pied nearly 22 per cent. of all the cultivated land in that pergunnah. The best Cotton comes from the Beergurh and Kalinger portion of the Budonsa pergunnah.

Question II.—What is the average produce per acre, its value at the market rate, and the estimated proximate value at this rate of the entire Cotton crop of the district?

Answer.—It is not easy to estimate the produce per acre. The produce varies considerably in amount in different parts of the district, and the want of a fixed standard of weight throws increased difficulties in the way of forming a satisfactory estimate. In no two pergunnahs is the "seer" exactly equivalent, and in many cases the variation in standards large. Another difficulty arises from the fact that in this district Cotton is scarcely ever sown singly. "Urhur," "Oord," "Tillee," are almost invariably sown with it in small quantities. No doubt if Cotton were cultivated alone the average produce would be higher than it is. As it is, taking the seer of full weight, probably the average produce per acre in ordinary years does not exceed 80 seers of "kupas," that being the term for the raw uncleaned Cotton with the seed. The price of "kupas" in the villages varies from 9 to 14 seers per Rupee, but this variation is due probably to the variation in the standard of weight than to any other cause. From 10 to 11 full weight seers for the Rupee may be taken as the average price of "kupas" over the whole district. This would give nearly Rs. 8 as the average value of the produce of an acre, and rather more than Rs. 3 as the value of the produce of a beegah. [This estimate must be near the mark, because from Rs. 3 to Rs. 4 is the sum at which the people themselves estimate the value of the produce of the beegah of cotton.] Something, too, must be allowed for the produce of the urhur or other crop sown with the Cotton. The estimate cannot be too high, because if it were, Cotton would be less remunerative than other crops, which it certainly is not. In the process of cleaning or extracting the seeds

by the "churkha, the raw Cotton loses from two thirds to three fourths of its weight That is to say, of the better kinds of Cotton, one seer will be obtained from three seers of "kupas, the remaining two seers being "binoula, or seed In the inferior qualities it requires four seers of 'kupas to produce one of Cotton It follows, then, that if we assume the average produce of an acre sown with the Cotton to be eighty seers of "kupas the average produce per acre of "rooee, or clean Cotton, will be between one third and one fourth of that quantity Probably twenty five seers per acre will be a fair estimate But this estimate is for ordinary years, as the present must be considered an exceptional year, the Cotton crop having in many parts of the district been much injured by the heavy rain fall in September As a general rule, the 'kupas is cleared of seed and prepared for the market by the ryots themselves, but sometimes traders buy up the raw material in large quantities and pay for its cleaning by hired workmen In this case the workmen are paid in proportion to the amount of clean Cotton produced. The rate varies from year to year and differs in different parts of the districts For producing a maund of clean Cotton the rate is sometimes as low as six or eight annas, and sometimes rises as high as one rupee, eight annas may perhaps be taken as an ordinary rate The Cotton seed or binoula, obtained by passing the uncleaned Cotton through the "churkha may be valued at about one rupee per maund We thus have data for calculating the cost price of a maund of clean Cotton of the best quality, as follows —

	Rs	As	P
Cost of 120 seers of kupas at 10 seers per Rupee	12	0	0
Cost of cleaning by churka,	0	8	0
	12	8	0
Deduct price of two maunds of seed at one Rupee per maund	2	0	0
	10	8	0

We thus obtain Rs 10 8 0 as the cost price of a maund of clean Cotton Allowing for the traders profits and

Chilla to Mirzapoor is 3¼ annas per maund, and from Rajapoor to Mirzapoor from 2 to 2¼ annas per maund.

Question IV.—What is the usual or best period for sowing the crop in the District?

Answer.—The sowing takes place in the month of Assar or July, commonly after the first fall of rain. The ground is generally manured if the ryot can afford it. It is ploughed only once or twice. It is never watered, but always weeded while the crop is springing up—generally three times, but sometimes four, and occasionally, but very rarely, as many as five or six times. The weeding takes place during Sawun or August, Bhadon or September, and the beginning of Kooar or October. Cotton is generally sown on high ground in lighter soils—on the sides of ravines, for instance—or on elevated spots where the water cannot lodge.

Question V.—At what time is it usually gathered when the crop is of this year's growing?

Answer.—About the end of October the crop is generally matured; and the gathering takes place between then and the end of December.

Question VI.—Is the crop in the district usually an annual one, or is it usually allowed to remain standing for a second or third year, or for still longer periods?

Answer.—The crop is *always an annual one,* fresh seed being invariably sown. The same plants are never allowed to remain standing for a second crop, as it is the opinion of the people of the district that the plants produce nothing in the second year. In this district the same land is never cultivated with Cotton in two successive years. After a field has borne Cotton, always two, and sometimes three years are allowed to elapse before it is again sown with that crop.

Question VII.—Answered above.

I have, &c.
H. W. DASHWOOD,
Collector.

STATEMENT [illegible] of Cotton Cultivation in different [illegible]

Names of Pergunnahs.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] ...	[illegible]	1,42,[illegible]	[illegible]	[illegible]	6·7
[illegible]	2,42,[illegible]	1,[illegible]	9,[illegible]	[illegible]	6·6
[illegible]	[illegible]	1,[illegible]	0	[illegible]	[illegible]
[illegible] ...	[illegible]	1[illegible],712	[illegible]	3·1	5·2
[illegible] ...	2 [illegible]	1,[illegible]	15,77[illegible]	6·4	1·2 nearly.
[illegible] ...	2,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] ...	[illegible]	[illegible]	17,[illegible]	[illegible]	[illegible] nearly.
[illegible] ...	[illegible]	1,[illegible]	14,[illegible]	[illegible]	1·2
Total, ...	19,[illegible],312	[illegible]	[illegible]	4·6	9·3

H. W. DASHWOOD,
Collector.

(COPIES.)

From Deputy Commissioner of Jaloun, to Secretary to the Sudder Board of Revenue, N. W. P., Allahabad, (No. 51 A,)—Dated Camp Calpee, the 21st November 1861.

SIR,—I have the honor to acknowledge receipt of Sudder Board of Revenue's Circular No. E, E, of 1861, dated the 11th instant, and in reply to forward copy of Cotton Statement sent to the Manchester Cotton Association through the Commissioner.

2. This Report will be found to contain information on all the points alluded to by the Board.

I have, &c.,
A. H. TERNAN,
Deputy Commissioner.

JALOUN DISTRICT

Area 2,313 Square Miles—Population 2,46,297 Inhabitants

Question 1st—Is the Cotton plant cultivated in your District?

Answer—Yes, to a large extent, but it is impossible to state with anything like accuracy the amount of land given up for such cultivation, particularly since entire destruction of Official Records in 1857 58 One third of the district may be given as a proximate amount The Cotton crop is one of the autumn crops collected in December The seed when separated from the pods is used for fattening cattle, as also are the stems

Q 2nd—What are the varieties?

A—There are no varieties in this district, but the Cotton grown in Bundelcund, south of the Betwa River, is considered superior to that produced in this district and in the North West in general Large quantities are sent down, through Calpee on the Jumna, to Calcutta for shipment In this district rich alluvial soil, called "mar, about the towns of Koonch and Jaloun, yields the best quality

Q 3rd—If the American variety grows in your district, when was it first introduced, and has its cultivation increased or fallen off?

A—Having no data to go upon, I can only state from hearsay *that the American Cotton was introduced by the* East Indian Company in the neighbourhood of Calpee under the superintendence of some American gentlemen, but *from* mismanagement, I believe, greatly and want of irrigation the experiment failed At one time the East India Company had a large factory at Calpee, and bought up largely the Native Cotton for export to China and Europe The factory was closed on the Hon ble Company ceasing to be a Trading Company, and it was sold to a private firm, which carried on business within a few years of the late disturbances There is every reason to believe the American Cotton would thrive in this district

Q. *4th.*—Can you give the statistics, *i. e.*, the number of acres cultivated, and the annual amount of produce, also the yield per acre?

A.—As above stated no American Cotton is now grown in this district, nor can any exact statistics be as yet furnished of the number of acres cultivated, or amount of produce of even Native Cotton. As far as I have been able to ascertain from Native documents, about 66,000 acres are sown with Cotton; when the rains are plentiful, the amount of produce may be estimated at 70,000 maunds or 5,60,000 ℔s. The average produce is as follows per acre, seed 10 ℔s :—

PRODUCE.

Cotton raw, ...	320 ℔s.
Cotton spun, ...	80 ℔s.

Q. *5th.*—Is it your opinion that the American plant in your district deteriorates in quality and staple each year, when preserved from admixture with other varieties?

A.—From want of experience in the matter, it is impossible to answer this question satisfactorily.

Judging from the effect of the climate on American vegetables in general, I think American Cotton would deteriorate annually; but let the American plant have a fair trial before we build upon what may be an error. As I said before, a former experiment failed, but it may have been from want of experience or knowledge in those to whom this important question was committed.

Q. *6th.*—What is the peculiar nature of the soil and climate?

A.—There are four varieties of soil in this district, yielding as follows:—To 10 ℔s. of seed sown in one acre mar or rich black alluvial soil, most favorable for Cotton, yielding raw Cotton 320 ℔s. spun cotton 80 ℔s. Kabur, next to the mar in richness, but with a greater admixture of clay. A hot sun causes large fissures to open in every direction; these absorb the water so necessary for the

growth of Cotton, again, the hot wind gets to the roots of plants through these fissures and destroys them Yields per acre, raw Cotton 240 lbs, spun cotton, 60 lbs. Purwah, a good description of light, sandy soil,—requiring good irrigation, however, when it produces most crops abundantly—yields, raw Cotton, 160 lbs., spun cotton 40 lbs.

The heat in this district is very great from the 1st of April to the 15th of October or 1st of November. The rainy season sets in about the end of June, and continues till the middle of September or till the 1st of October. The average fall of rain is from 30 to 40 inches. From the 15th of November to the 1st of March, the climate is good, and favorable to the European residents.

Q. 7th—*Is irrigation employed in cultivation? If [illegible] would irrigation improve the quality and [illegible] the quantity, and is it available?*

A—Irrigation is not generally [illegible] tion of Cotton The plant [illegible] rainy season, and the [illegible] many months, sufficiently to [illegible] irrigation could be used in "[illegible]" [illegible] caused by a hot sun would [illegible] benefit Water is in this district found [illegible] face, wells are consequently very [illegible] by the cultivators In most soils, irrigation [illegible] produces splendid crops. During the dry season [illegible] tivators sometimes dig temporary well[illegible] to fall in during the rains. I must mention [illegible] tives often mention an insect they call "[illegible]" injurious to the Cotton plant

Q 8th—*What is the estimated quantity of clean [illegible] ton produced per acre, and what extent of ground [illegible] be devoted to its production?*

A—An acre of land produces about 50 lbs. of clean Cotton The cultivation might easily, I think, be doubled. The plants require continual weeding and attention. Tl

cultivators would no doubt raise Cotton in abundance if they saw it yielded in the market a better price than wheat, which is now grown to a great extent.

Q. *9th.*—*Can the cultivation be extended with facility?*

A.—I think Cotton cultivation could be greatly extended and with facility, but to do so you must bring into the market European Agency, Eurasian Agency, and European Capital. The Native will do nothing. Again, the laws regarding the land tenures in the country must be altered to admit the requirements of our European civilization approaching more to the nature of tenures in Europe.

Q. *10th.*—*Are there obstacles to its cultivation, and of what nature?*

A.—I know of no obstacles to its cultivation, if proper means are used. A want of rain would no doubt bring a partial failure of Cotton crop with it; but in many instances, again, artificial irrigation might amply supply the deficiency.

Q. *11th.*—*What is the probable consumption by the Natives, and what the quantity available for export?*

A.—About 20 per cent. is the probable consumption of the Natives and the rest is available for export. Full and most complete returns of the Cotton produced in this district are to be found among the records of the India Office.

Q. *12th.*—*Are there any and what Merchants in your district who are buyers of Cotton from the growers, or who would buy Cotton if produced? If not, what would be the necessary Agency to employ to purchase the Cotton and send it to England?*

A.—The Cotton of this district is generally bought up by Agents from the large Native firms at Mirzapoor. These depute men into the districts, who make advances to the cultivators or farmers at the sowing season, and they (in January and February) take the Cotton to Calpee, from whence it goes by water to Mizapoor. A European

Agent or Assistants, European and Native at Calpee on the Jumna would be, I think, the best Agency to employ for the purchase of Cotton and transmission of it to England

Q 13—At what probable price can it be purchased clean, either at the place of growth or at the port of shipment?

A—The price of clean Cotton in the gathering season, when it is cheapest, is from Rs 10 to Rs 12 for a maund or 80 lbs, and in the beginning of November, before new crop is produced, it runs up to Rs 15 and Rs 18 for 80 lbs The rates at the shipping ports would depend on the demand and supply, and cannot be ascertained here

Q 14*th*—What are the means of conveyance from the Cotton fields to the port of shipment, and the cost per pound, and are they capable of being facilitated, and in what manner?

A—This district is a large tract of level country From November to July, the roads are excellent, and offer no obstacles whatever to traffic The Cotton is carried on Bullock carts to Calpee, and there taken on boats to Mirzapoor and Calcutta The cost is about one rupee for 80 lbs from Calpee to Calcutta Steamers drawing little water might be used on the Jumna with great advantage to commerce, and a railroad from Cawnpore to Gwalior would give access to the wealth of this district and neighbouring districts of Bundelcund and Gwalior

Q 15*th*—Are the growers supplied with good seeds, and would they attend to the cultivation of superior seeds if supplied them?

A—The seed at present used is the produce of the district The Native of India does not experimentalise he only goes a beaten path The cultivators would take no interest in the matter When Europeans come as settlers in the land, such experiments can fairly be

tested with immense advantage to the country in general as well as to individuals. Till then failure will most likely ensue.

Q. 16*th.*—Are they furnished with other machinery than the churkha for cleaning or presses for baling the Cotton, or in what manner is it packed for the market?

A.—The churkha is the only machine used in this district; no presses have been known since the closing of the Factory at Calpee. The Cotton is packed in common gunny-bags or large nets, and arrives in the market in a most filthy state.

Q. 17*th.*—What is the cost of cleaning Cotton per pound by the churkha or other machine used?

A.—The cost of cleaning by the churkha is one rupee or two shillings for 80lbs., and one man can clean from 20lbs. to 24lbs daily.

Q. 18*th.*—Can and will you favor us with samples of Cotton grown in your district?

A.—Samples of best quality of Cotton produced in this district are herewith forwarded.

Q. 19*th.*—It being important that seed of the American variety should be saved for re-sowing in order to extend its growth, will you take steps forthwith to secure it in a pure and unmixed state?

A.—Should American Cotton be introduced into this district, as I said before, it must be through Agents appointed for that special purpose, and who know the language of the country and are accustomed to deal with Asiatics. No other persons can give such an important subject the attention it will require, or possess the experience and knowledge desired.

Q. 20*th.*—Will you please furnish samples of Cotton or goods made from Cotton by the Natives, and state the cost of manufacture and selling price?

A.—The cloths made in the district are of the coarsest description, and the population is clothed chiefly in British

fabrics. The cloths of the district sell at about two annas per yard.

Q. 21*st.*—Will you furnish this association with a printed or other statement of the extent of waste lands in your district, and also a sketch-map of the same on the smallest scale possible?

A.—The waste lands of the district are generally scattered in patches of no great extent here and there, and are useless for all purposes of cultivation, being from the nature of the soil unproductive, and fit for grazing cattle only. No map is consequently furnished.

Q. 22*nd.*—Will you favor the Committee with a detailed communication upon all the points referred to in the above questions, and generally offer suggestions as to the most effectual manner in which the trade and commerce of your district may be extended, giving special reference to Cotton, as it is proposed to publish your letter with your replies in the *Cotton Supply Reporter* (published by this Association), for the benefit both of the people of India and of this country?

A.—In answering the foregoing questions, however *crudely from want of data to go upon, I have laid before* the Committee all the information I have been able to procure in this district, either by my own efforts or those of the Officers under me. To extend the *trade of India* with England, to indeed make India pay to bring out its enormous natural wealth, Europeans of energy, capital, and science must come and settle in the land. As heads of labor, they will instil into the Native gradually some wish to progress, and both parties will find [illegible] advantage in improvement. Innumerable are the [illegible] ducts of the country, many of which are [illegible] partially known by the Natives, and only require [illegible] energy to cause their full development. [illegible] neglected productions are Silk, [illegible] Vegetable Oils, *Hemp*, *Jute*, [illegible]

only requires care to equal that of the West Indies. The wealth of India is an unexplored mine, of which the surface only has been scraped. The common churkha used by the Natives only costs five annas. No Native cultivator would pay the cost of a Cottage-Gin or give Cotton in exchange; but if he saw Cotton factories springing up all over the country, then his prejudices would give way to the palpable benefit to his pocket.

I have, &c.

A. H. TERNAN,

Deputy Commissioner.

PRICES Current of Cotton from 1859 to May 1862.

1859.

Districts.	January.	February.	March	April	May	June	July.	August.	September.	October.	November.	December.
Seharunpoor,	0 0 0	0 0 0	12 13 0	14 8 6	16 0 0	16 0 0	12 8 0	12 5 0	11 8 0	12 5 0	12 4 9	10 0 0
Meerut,	12 5 7	[illegible]	15 4 0	0 0 0	16 0 0	0 0 0	14 8 0	13 5 3	12 5 0	11 6 9	0 0 0	9 6 6
Allygurh,	14 5 0	14 10 0	17 0 0	17 12 5	18 0 0	14 8 0	16 0 0	17 8 0	12 4 0	11 8 0	11 6 0	10 0 0
Boolundshuhur,	15 5 4	18 5 4	17 5 4	16 0 0	18 0 0	16 0 0	13 5 4	10 10 8	12 5 0	11 7 0	10 11 0	9 11 0
[illegible]	14 8 4	[illegible]	16 [illegible] 0	18 0 0	20 0 0	17 8 0	16 0 0	12 12 0	0 0 0	0 0 0	9 13 9	10 0 0
[illegible]	16 0 0	[illegible]	14 8 0	16 0 0	20 0 0	20 0 0	20 0 0	20 0 0	13 5 3	13 5 3	10 10 6	12 9 7
[illegible]	[illegible]	[illegible]	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
[illegible]	[illegible]	[illegible]	16 0 0	17 8 0	17 8 0	18 0 0	16 0 0	13 0 0	11 0 0	10 0 0	0 0 0	12 0 0
[illegible]	[illegible]	[illegible]	[illegible]	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
[illegible]	[illegible]	[illegible]	[illegible]	20 0 0	24 0 0	18 12 0	20 0 0	13 0 0	11 8 0	15 0 0	18 0 0	12 4 11
[illegible]	[illegible]	[illegible]	[illegible]	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
[illegible]	[illegible]	[illegible]	21 [illegible]	22 0 0	0 0 0	21 0 0	21 0 0	25 0 0	25 0 0	25 0 0	16 0 0	16 0 0
[illegible]	[illegible]	[illegible]	15 2 6	18 2 4	17 12 0	17 12 0	21 0 10	13 5 4	17 12 5	20 0 0	13 5 4	11 7 0
[illegible]	[illegible]	[illegible]	[illegible]	21 0 0	21 0 0	[illegible]	17 8 0	13 12 0	0 0 0	13 12 0	12 8 0	0 0 0
[illegible]	[illegible]	[illegible]	[illegible]	22 12 8	24 12 6	[illegible]	14 13 9	22 13 9	16 0 0	14 8 9	14 8 9	11 7 0
[illegible]	[illegible]	[illegible]	[illegible]	15 4 7	17 4 9	[illegible]	21 9 10	0 0 0	20 0 0	16 0 0	16 0 0	14 8 9
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16 0 0	16 [illegible]	14 8 4	14 5 4	14 4 11	12 4 11	10 0 0	9 8 0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17 12 0	16 0 0	18 0 0	17 [illegible] 0	10 0 0	12 0 0	10 9 6	0 0 0

PRICES Current of Cotton from 1859 to May 1862.

1860.

Districts.		January.			February.			March.			April.			May.			June.	
Seharunpoor,	...	10	0	0	9	8	0	10	0	0	10	0	0	10	0	0	8	15	0
Meerut,	...	9	6	6	0	0	0	9	6	9	8	14	3	8	6	3	7	9	3
Allygurh,	...	10	12	0	10	0	0	8	0	0	7	9	0	7	4	0	7	4	0
Moradabad,	...	9	11	0	10	0	0	10	0	0	0	0	0	9	6	9	9	6	9
Bareilly,	...	0	0	0	9	6	0	8	12	9	8	12	0	9	4	0	8	13	0
Budaon,	...	10	10	8	11	7	0	9	5	9	11	6	9	0	0	0	7	10	3
Muttra,	...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agra,	...	11	8	0	9	8	0	8	4	0	7	0	0	7	0	0	8	0	0
Furruckabad,	...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0
Cawnpoor,	...	12	8	0	10	12	0	11	0	0	10	12	0	10	8	0	1	0	0
Banda,	...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allahabad,	...	25	0	0	25	0	0	20	0	0	20	0	0	20	0	0	20	0	0
Goruckpoor,	...	10	0	0	10	0	0	13	5	4	13	5	4	13	5	4	13	5	4
Mirzapoor,	...	13	0	0	12	8	0	13	0	0	13	0	0	0	0	0	13	8	0
Benares,	...	16	0	0	13	5	4	13	5	4	13	5	4	13	5	4	14	8	0
Ghazeepoor,	...	17	12	5	17	2	5	14	8	9	14	8	9	12	12	9	12	12	9
Jubbulpoor,	...	10	0	0	10	0	0	9	6	0	8	6	8	0	0	0	0	0	0
Saugor,	...	11	7	0	0	0	0	11	7	0	10	0	0	11	9	9	12	4	11

Districts.		July.			August.			September.			October.			November.			December.	
Seharunpoor,	...	11	8	0	11	8	0	12	5	0	13	5	0	11	14	0	11	0	0
Meerut,	...	10	9	3	10	10	6	10	10	8	11	0	6	10	0	0	9	6	6
Allygurh,	...	10	0	0	10	10	6	10	10	6	12	5	0	11	7	0	11	0	0
Moradabad,	...	11	7	0	9	6	7	9	6	7	11	7	0	9	6	7	9	6	6
Bareilly,	...	10	0	0	9	14	0	9	9	6	0	0	0	0	0	0	10	0	0
Budaon,	...	9	6	3	10	10	8	10	0	0	13	1	0	12	12	0	11	6	9
Muttra,	...	9	0	3	9	0	0	10	4	0	10	8	0	10	8	0	0	0	0
Agra,	...	9	8	0	11	0	0	11	0	0	13	4	0	11	8	0	10	0	0
Furruckabad,	...	10	0	0	13	5	4	11	0	0	12	1	3	11	7	0	15	8	0
Cawnpoor,	...	11	0	0	12	9	7	12	9	7	12	9	7	11	7	0	12	4	11
Banda,	...	0	0	0	11	0	0	10	0	0	11	0	7	11	8	0	11	0	0
Allahabad,	...	12	12	0	13	8	0	13	8	0	15	0	0	14	0	0	0	0	0
Goruckpoor,	...	13	5	4	13	5	4	13	5	4	16	0	0	13	5	4	15	0	0
Mirzapoor,	...	10	0	0	10	0	0	10	10	0	14	0	0	17	8	0	13	12	0
Benares,	...	12	8	0	13	5	3	13	0	0	13	0	0	13	0	0	14	8	6
Ghazeepoor,	...	12	12	0	12	12	9	12	12	9	14	3	6	15	3	9	14	3	6
Jubbulpoor,	...	8	0	0	10	0	0	10	0	0	10	0	0	8	14	9	9	2	3
Saugor,	...	9	11	2	10	6	2	10	1	5	10	7	0	10	4	0	11	0	7

No. 2.

No 771.—*From* G H M BATTEN, ESQ, *Secretary to the Sudder Board of Revenue, North Western Provinces, Allahabad, to* SIR GEORGE COUPER, BART, and C B, *Secretary to the Government, North Western Provinces, (Dated Allahabad, the 18th of October 1862)*

SIR,—In the beginning of September (the earliest period at which such an enquiry was practicable) the Sudder Board of Revenue called for returns from all the Districts in the North Western Provinces, of the approximate area brought under Cotton cultivation in the present season, and of the prospects of the crop

REVENUE.
Present
W. MUIR, ESQUIRE, *Senior Member*
and
R. MONEY, ESQUIRE, *Junior Member.*

2. Up to May or June last, the market price of cleaned Cotton had not reached higher than from 9 or 10 Rupees per maund in the Western Districts, to 15 or 16 in the Eastern The speculation, caused by the urgency of the demand from England, began at this point to act with an extraordinary effect upon the market throughout the country There was a sudden and great rise of price, but the advance was neither uniform nor sustained, retrograding sometimes as much as 3 and 4 and even 5 and 6 Rupees per maund, within the course of a few days, and then starting upwards again. The following details will show the general progress of prices The figures denote the rate in Rupees per maund of 80 lbs

Month	Meerut.	Agra.	Mirzapore	Ghazeepore
May,	Rs. 7 to 9	Rs. 11 to 14	Rs 11	Rs. 15 to 17 8
June,	"	Rs. 12 to 14	Rs 16	Rs 15 to 17
July,	Rs. 10	Rs. 11 to 19	31 4 Maximum	Rs 17 to 24
August,	Rs 12	Rs 13 8 to 17 8	22 8 Minimum,	Rs 25 to 24
September,	Rs 10 to 15	Rs 14 10 to 23	30 Maximum	Rs 22 to 26 8
October,	Rs 12 8 to 14	"		

3. It will be seen that speculation has gone the greatest length at Mirzapore, the price having repeatedly risen above 30 Rupees a maund, or 84 a shilling a cwt. above 9*d*. a ℔.

4. The immediate result was to draw forth from all parts of the country a large portion of the stock which had been kept for local consumption, and Cotton from all directions was hurried down the country by every possible means of conveyance. An estimate of the amount that has been thus exported will be given at a farther part of this Report. Meanwhile, it will at once be perceived, that the attention of the people could not but be universally turned to the subject, and to the great profits that might be expected from the cultivation of Cotton, were it only to supply the vacuum caused by the exportation of existing stocks for local consumption. The probability likewise of a continuance of the present high prices, or even of a farther enhancement, began to be apprehended by the people, and the Merchants at the chief entrepôts eagerly watched the telegrams of prices in England, and the progress of events in America.

5. The sudden enhancement of the price of Cotton, however, was too long deferred to have its full effect upon the sowings of the year. In the Cotton-growing Districts; the excitement had hardly reached the local markets by the end of June, when arrangements must be made for the coming crop. The extension of cultivation, which has actually taken place, is rather attributable to the previous general rise of price than to the later and more extraordinary rise.

6. Thus far of the effect of the market upon the present crop; the Board proceed to notice the effect of the season.

7. As explained in paragraph 17 of my letter dated the 24th June, Cotton to succeed well must be sown towards the end of June or early in July. In most of the

Western Districts rain fell sufficiently early to admit of this being done. But in the Lower Doab and Bundlecund, there was no fall of rain till about the 5th or 6th of July; it then rained incessantly for about three weeks, and thus the cultivator had hardly an opportunity to effect any sowings till the season for sowing had passed away. Thus while the increase of area estimated as now under Cotton exceeds thirty-one per cent. in the Agra Division, it is as low as twenty per cent. in the Allahabad and Bundlecund Districts. In the Futtehpore and Allahabad Districts there has been an actual decrease of area, wholly attributable to this cause.

8. The above remarks will sufficiently explain the variations in the following table. The out-turn of clean Cotton is calculated at the same average rates as were taken for the previous season, the grounds of the assumption having been fully explained by the Board in paragraphs 3 to 5 of my letter, dated 24th June.

Division.	District.	1861-62. Acres.	1861-62. Maunds of clean Cotton of 80lbs each.	1862-63. Acres.	1862-63. Maunds of clean Cotton of 80lbs each.	Estimated increase over last year.
Meerut.	Seharunpore, ...	23,750	35,750	24,000		
	Moozuffernugger,	17,000	25,500	20,000		
	Meerut, ...	36,000	51,000	45,000		
	Boolundshuhur, ...	21,750	37,000	33,227		
	Allygurh, ...	1,65,000	2,00,000	1,95,000		
	Total, ...	2,66,500	3,52,250	3,17,227	4,50,000	27 per cent.
Rohilcund.	Bijnour, ...	23,000	34,500	25,350		
	Moradabad, ...	27,500	42,000	33,000		
	Budaon, ...	52,500	78,500	80,000		
	Bareilly, ...	24,000	36,000	26,367		
	Shajehanpore, ...	8,000	8,000	9,000		
	Total, ...	1,35,000	1,99,000	1,73,717	2,50,000	25 per cent.
Agra.	Muttra, ...	68,000	90,000	79,400		
	Agra, ...	73,826	1,00,000	1,13,535		
	Etah, ...	26,000	39,000	35,000		
	Mynpoory, ...	19,000	28,500	25,000		
	Etawah, ...	47,000	70,000	56,300		
	Furruckabad, ...	10,000	15,000	11,000		
	Total, ...	2,43,826	3,42,500	3,20,235	4,50,000	31⅓ per cent.
Allahabad.	Cawnpore, ...	63,000	90,000	70,400		
	Futtehpore, ...	24,000	30,000	23,250		
	Banda, ...	89,000	60,000	1,20,000		
	Allahabad, ...	27,000	27,000	18,300		
	Total, ...	2,03,000	2,07,000	2,31,950	2,50,000	20 per cent.
Jhansie.	Jhansie, ...	28,000	28,000	28,000		
	Jaloun, ...	50,000	60,000	62,000		
	Humeerpore, ...	38,500	34,000	4,400		
	Total, ...	1,16,500	1,22,000	1,34,000	1,50,000	22 per cent.
	Grand Total, ...	9,64,826	12,22,750	11,77,129	1,550,000	26¾ per cent.

9. It is to be remembered that the above is for the most part only an estimate, in some Districts checked by reference to the village papers, in others founded upon general observation. The aggregate result, however, is believed to be approximately correct.

10. The cultivation of Cotton is still unknown as a source of traffic in the Benares and Goruckpore Divisions and in the Hills. Only in Mirzapore there has been an

increase of some 1,400 acres, making the total cultivation there somewhere above 4,000 acres

11 The entire area under cultivation, it will be seen, is 11,77,000 acres as against 9,65,000 in the previous year, or an increase of 22 per cent

12 The estimated out turn of clean Cotton is in maunds about one million and a half (or 11,00,000 cwts) as against one million and a quarter (or 8,00,000 cwts) in the previous year, or an increase of 26¾ per cent

13 But the Board regret *to state that this as the average estimate of the produce that might have been looked for is not likely to be realized* The season, *favorable for almost every other crop*, has been an unfortunate one for Cotton The plant itself has been generally reported strong and healthy, but the long continued stormy weather and violent rain in September have seriously ruined the prospects of the crop The same unfavorable report has arrived from every quarter, and the Board fear there will be with hardly any exception a scanty and indifferent out turn The Collector of Meerut reports that the plants have in many places shed their still undeveloped pods, broken off as stalks of wheat are by a hailstorm In some other quarters the damage seems to have been done at an earlier stage, when the blossoms decayed, and fell off from continued wet, and the absence of sunshine. In many places the cultivators have been so dispirited by the prospect of loss that they have neglected to weed the plant

14 *It is impossible at this early period of the season to say what the proportion of loss is likely to be.* The first pickings are the most plentiful and the best, and a large portion of these in many parts have been irremediably injured and lost But, as before stated, the plants are generally healthy, and the secondary flowers may yet yield valuable produce, sufficient in a great measure to make up for the loss In some parts of the Upper Doab where the

sowings were early, there has already been a gathering of blown Cotton, though it may be feared of an injured quality.

15. Towards the end of the year, the Board will again report how far these fears and hopes, respectively, have been justified by the result.

16. I am now directed to place before the Government such information as the Board have been able to collect of the amount of Cotton lately transported, or now on its way to Calcutta.

17. Mr. Brodhurst, Collector of Ghazeepore, writing at the end of September, estimates on careful enquiry that upwards of 2,00,000 maunds (nearly 1,50,000 cwts.) have either passed down the river since May last, or were ascertained to be *en route* from Agra, Mirzapore, &c. The details are as follows:—

Already exported.		*Maunds.*
238 boats from western Stations to Calcutta,	88,725	
47 ditto ditto, from Ghazeepore,	19,625	
		1,08,350
To other Stations East of Ghazeepore,		30,000
En route.		
Coming from Agra, ...		20,000
Ditto Mirzapore, ...		25,000
Being laden at Ghazeepore, ...		5,000
In store at do. for exportation, ...		10,000
Despatched by Ganges Steam Navigation Company's Steamers, ...		2,300
Estimate of despatches by other Steamers, ...		10,000
Total Maunds, ...		2,10,650

18. This estimate is believed to be short of the mark. The Collector of Mirzapore reports that "as far as he can ascertain, about 25,000 bales of Cotton have been despatched by Steamer to Calcutta. This is about one-fourth of the amount that has been exported in native boats."

19. The exportation still goes on, but there is at present a lull as the wharves, and ware-houses. in Calcutta

are said to be so over stocked with bales that there is at present no space for more

20 The transportation of Cotton by Steamer from the Upper Provinces is a thing quite unprecedented The following Memorandum by Captain Bird on the subject will therefore prove interesting It is dated the 9th October —

"Cotton was first shipped from Allahabad on the 9th of August last, and up to this date just two months, there have been despatched by vessels of the—

Steam shipment.

	Bales.
India General,	1,330
By vessels of all other Companies,	1,441
Total Bales,	[illegible]
Averaging two maunds each, maunds,	[illegible]
During the same time there came by Rail from Agra 11,386 Bales, weighing maunds,	[illegible]
By cart the arrivals have been small, and may be estimated at maunds,	1,000
and by country boats,	5,000
Total arrival in maunds,	[illegible]

Arrivals from August to October 9th 1862.

"This estimate is moderate and probably [illegible] mark, as the Ghat Manjee states that 20,000 [illegible] left by country boat within the last two [illegible]

"All this Cotton went in loose bales [illegible] freight 3 Rupees [illegible] 1 Rupee per [illegible]

Cost of freight

"A loose bale of three maunds [illegible] and the same bale screwed [illegible] 14 [illegible] ference in freight is 100 per cent [illegible] The screwed Cotton from [illegible] at 1 Rupee 8 annas per [illegible] taken at 1 Rupee, the [illegible]

Cost of screwing.

"The cost of screwing at Mirzapore is 1 Rupee 10 annas per bale of three maunds, but as labour is rather dearer at Allahabad, we may calculate on 1 Rupee 12 annas per bale as a fair rate, but this charge is compensated for by the following advantages: the person screwing cleans the Cotton from sand and other impurities, provides gunnies and lashings, and sends the Cotton to market in a much more saleable condition. The risk from fire, water, and pilfering, which last may be reckoned at 10 per cent., is reduced to a minimum, and by the most moderate estimate the shipper derives an advantage by screwing of one Rupee per maund, whether the Cotton be sent by cart or country boat, and 1 Rupee 8 annas per maund if sent by Steamer.

Mirzapore.

"From Mirzapore all Cotton sent by Steamer, and most of that sent by country boat is screwed, and the shipments by Steam have been quadruple of that from Allahabad. If I may judge by the quantity the vessels of the India General have taken, a considerable proportion of the Cotton that comes down the Jumna and Ganges is screwed at Mirzapore, but if the same facilities were given at Allahabad, I see no reason why it should pass this Station.

Ghazeepore.

"There are no Screws at Ghazeepore and no shipments by Steamers."

21. Cotton first began to be conveyed by Railway in May last. Since that period, the amount thus carried from Agra to Allahabad has been as follows:—

			Maunds.
May,	...	...	1,191
June,	...	...	2,815
July,	...	...	4,020
August,	...	...	17,206
September,	...	...	12,320
Total in five months,		...	37,552

22 But the want of Screws is greatly felt both by the Railway Authorities and the private traders About 45 maunds is the greatest quantity that can be packed in one truck, and a truck cannot be run from Agra at a lower cost than from 30 to 35 Rupees This is at the rate of about a Rupee per cwt for 280 miles, so that the carriage of Cotton barely pays in its unscrewed state

23 The same difficulty has also been experienced in shipping unscrewed Cotton by the Ganges Canal, as the boats can only be partially laden, or they come in contact with the low arched bridges of the Canal The Cotton which has been transported in the loose unscrewed bales to Calcutta, has likewise suffered greatly from exposure to the dust storms of the hot winds, and saturation from wet during the rains

24 It is therefore with much satisfaction that the Board have received the intimation conveyed in your letter No 3856 A, dated the 10th September, that the Government have authorized the construction of a Cotton Press to be placed at one of the falls of the Ganges Canal, in the Upper Doab, and there worked by water power

25 It must, however, be borne in mind, that the smaller class of speculators in these Provinces could not make use of Screws, because "Screwed Cotton, as Mr Hogg writes from Mirzapore, "would only be received from well known dealers, as cheating by the mixture of inferior Cotton is easier in this case Seed and impurities screwed with the Cotton would also permanently injure the quality The operation must be undertaken by some well known parties, whose name would be a sufficient guarantee to the quality The Board would therefore suggest that it would be advisable to plant the Screw not as proposed by Colonel Turnbull, in the Meerut District, but as near as possible to Allygurh, Hatrass, or some such leading Cotton mart, where the largest traders are to be found.

Cost of screwing.

"The cost of screwing at Mirzapore is 1 Rupee 10 annas per bale of three maunds, but as labour is rather dearer at Allahabad, we may calculate on 1 Rupee 12 annas per bale as a fair rate, but this charge is compensated for by the following advantages: the person screwing cleans the Cotton from sand and other impurities, provides gunnies and lashings, and sends the Cotton to market in a much more saleable condition. The risk from fire, water, and pilfering, which last may be reckoned at 10 per cent., is reduced to a minimum, and by the most moderate estimate the shipper derives an advantage by screwing of one Rupee per maund, whether the Cotton be sent by cart or country boat, and 1 Rupee 8 annas per maund if sent by Steamer.

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26. The Board are glad to learn that Captain Bird has ordered three Cotton Screws to be established here at the Jumna Ghât, and that Mr. Palmer is about to do the same at Agra.*

27. At Mirzapore there are five Screws, of which four belong to European Merchants, and one to a Native dealer. The latter is used by such other Native Merchants as occasionally screw their Cotton, but most of the bales sent by the Native firms are unscrewed.

28. In furnishing their returns a few remarks of interest have been made by one or two of the Collectors.

29. Mr. Palmer writes from Bijnour:—"I have circulated in this District samples of American Cotton, supplied by Messrs. Mosley and Hurst, the Agents of the Cotton Supply Association, and I have also forwarded to them, on behalf of a wealthy and respectable Merchant, two samples of Bijnour grown Cotton, one very carefully cleaned, and the other in ordinary condition, requesting to know what price each would command if delivered at Calcutta. This year, if the sample of well cleaned Cotton (which surpasses their own samples in point of purity) be approved by Messrs. Mosley and Hurst, and command a fair price, a small consignment of it will be made, and next year, if desired, a very large amount will be secured."

30. Mr. W. A. Forbes, C. B., says regarding Meerut:— "All the returns show a considerable increase in the quantity of land under Cotton cultivation this year as compared with 1861-62, not so much as would perhaps be

* "NOTE.—The Collector of Meerut, writing on the 15th October, also reports that Mr. Michel is setting up a Cotton Screw on his Estate, and it will be ready for work immediately. It is constructed after the latest and best principles. He hopes to get a Canal cut and water power to work it by next season. In the mean time he is obliged to satisfy himself with manual labor or bullock power. Next season it will be available to the public. His Press is established with his new Indigo Factory at a village called Mussoorie, and actually on the Canal Banks, so that when pressed all Cotton can be shipped down straight to Cawnpore."

expected from the unprecedented rise in the price of Cotton, but it must be remembered that Meerut is not a Cotton growing District, the staple products are decidedly sugar and grain, and in one particular tract near the Estates of Mr John Michel, Indigo is being freely sown to a considerable extent under very *favorable* circumstances

"There is also another reason operating against a very rapid extension of the area of cultivation, and that is, that the cultivation as yet does not greatly profit by the rise in price

"There are two European Agents at present resident in the District, and ready to buy from and pay the growers, but the majority of buyers are middle men and bunniahs, who have the zemindars and cultivators in their power. Under these circumstances, I consider the increase as it stands favorable, and should the price continue at any thing near the present mark, competition amongst the pur chasers must tend to benefit the agriculturists, and induce them to grow more largely

"Mr John Michel, to whom Government have lately sold an Estate in this District, has been using his utmost endeavours to encourage the cultivation of Cotton, pur chasing largely direct from the growers, making advances where necessary, and taking payment of balances in Cot ton at market rates

"The late Telegraphic news of a *fall in the* English market of *4d* per lb does not seem as yet to have had any very serious effect upon the price, but it must yet do so, for I know that one large buyer, Mr Cohen of Meerut, has received orders to suspend his operations for the present in the market

"Mr Michel, in a Memorandum to me on the subject, makes the following remarks, which are worthy of notice, as shewing that a new set of speculators are showing themselves in the market, and I trust, that in the end with advantageous results to the cultivators He says —'No

advantage to cultivators, as all the crop was in the hands of the bunniahs months before. This will always be the case without a great change in the system of Revenue collection. The bunniahs being all sold out ("of Cotton") now, and having the zemindars in their books, will let prices down on small sales, when the crop is in full swing, buy low, and hold up the market. Their only competitors, *the Marwaree Opium speculators,* which trade being now only a morderate profit, is being relinquished for the safer and larger Cotton trade; but these men, although scouring the District now in all directions on camels, are unknown, and therefore not trusted by the zemindars. This with their long established obligations to the bunniahs compel them to sell sharp to meet the Revenue demand.'

"The above quotation from Mr. Michel is given, not because I concur with some of his reasons, but as showing the novel spectacle of the famous Opium Merchants from Bombay entering upon the Cotton speculations in the North Western Provinces. At present it is said their bills upon distant and unknown Firms, are looked upon with suspicion, although a bid of a Lac is accepted without question in the Calcutta Opium market. It would be curious to know how far these enterprising merchants are carrying their speculation.

"As will be seen from the abstracts of Tehseeldars' reports in the column of remarks to the return, the prospects of the coming Cotton crop are not considered bright. The long continued and heavy rains have destroyed, it is said, nearly one-third of the yield, and the loss will be the more felt by the cultivators by reason of the greater average under Cotton. But there are two considerations which give hope for future alleviation; the first is, that the amount of rain-fall may so far strengthen the plants as to increase the yield of 2nd pickings considerably, and the other, that English speculators, with hard cash in their hands, may cause prices to rise."

31. The Collector of Mynpoory writes that "advances are freely given for Cotton to be delivered at the rate of nine seers (uncleaned) per Rupee."

32. Referring to Mr. Under-Secretary Sandford's letter of the 9th instant, I am directed to say that a copy of this Report has been communicated to the Secretary of the Chamber of Commerce direct in order to save time.

I have, &c.,

G. H. M. BATTEN,
Secretary.

SUDDER BOARD OF REVENUE,
N. W. P., ALLAHABAD,
The 18th October 1862.

No. 3.

No. 913.—*From* G. H. M. BATTEN, ESQ., *Secy. to the Sudder Board of Revenue, N. W. P., to* J. D. SANDFORD, ESQ., B. A., *Offg. Secretary to the Government of the N. W. P.,—(Dated Allahabad, the 19th December 1862.)*

REVENUE.
Present:
W. MUIR, ESQ., *Senior Member.*
R. MONEY, ESQ., *Junior Member.*

SIR,—As promised in para. 15 of my address No. 771, dated the 18th October last, I have now the honor, by direction of the Sudder Board of Revenue, North Western Provinces, to submit a report upon the yield of the present Cotton crop.

2. In the Districts north of Meerut, it was about one-fourth below the average. Further down the crop was better, the loss being about a tenth, or at most an eighth; this applies to Meerut, Boolundshuhur, and Allyghur. Throughout the Lower Doab, the out-turn has been fair, in some places even above the average.

3. Upon the whole, the expectations expressed in paragraph 14 of the Board's last address have been fully realized in respect of the Districts lying to the north of the Jumna; and the increased area, then reported as having been sown with Cotton, may, in respect of that tract of country, be held to indicate the degree in which the supply for the present year has increased. The quality, however, will probably be found inferior; since, as before explained, the first pickings, which are the finest, were to a great extent lost.

4. The Board regret that they have a much more unfavorable report to give of the produce in the Districts south of the Jumna. In Muttra and Agra, which contain an area under Cotton of nearly 2,00,000 acres, the failure has been lamentably great. Mr. H. D. Robertson states, that, in the former District, "not half the usual quantity per acre has been secured, and that of a very inferior quality."

5. Similarly in Jaloun, Major Turnon estimates the yield per acre this year to be only 11 or 12 seers, instead of 30. In Jhansie, where the crop is reported somewhat better, the loss is supposed to be about 25 per cent. Further east, again, in the direction of Banda, the out-turn is probably not much above fifty per cent. of the average yield.

6. The Board fear from the reports they have received that in Gwalior and the independent states of Bundlekhund, the crop has likewise been much below the average.

7. As regards price, the market rates per maund have varied during the last two months from 14 Rupees in the Western Districts to above 21 in the Eastern. The following Table will show how great the fluctuations have been in the chief markets :—

Rate per Maund.

	31st October.				30th November.		
	Rs.	A.	P.		Rs.	A.	P.
Meerut, ...	14	8	9	...	13	4	6
Allygurh, ...	14	8	0	...	14	12	0
Agra, ...	18	0	0	...	15	0	0
Furruckabad, ...	21	0	0	...	14	8	0
Mirzapore, ...	16	0	0	...	16	0	0
Ghazeepore, ...	21	4	0	...	21	4	0

8. The exportation of Cotton from these Provinces continues unabated; every effort is strained by the speculators to carry the present crops to Calcutta at the earliest moment. Carriage of every description is pressed into the traffic; the roads are thronged by carts laden with Cotton destined for Calcutta, or some of the intermediate Stations. To such an extent, indeed, has capital been invested, and carriage engaged in the trade, that customary branches of merchandise have been neglected, and the transport of Salt eastward interfered with. The Salt revenue has lately received an unexpected check, not unreasonably attributed to this cause.

9. The Cotton trade is also beginning to take unexpected routes. The Senior Member was startled by

meeting on the Grand Trunk Road a line of carts laden with perhaps 500 maunds of Cotton moving *westwards* from Allygurh, and bound for Amritsur. It appears that this is the first occasion on which Cotton has been consigned from these Provinces to the Punjaub, for many years; and it is now carried by that route with the view of eventual exportation from Kurrachee. From one mart, Hatrass, it has been reported that about 12,000 maunds have already been despatched to Puttiala and Amritsur, as against 14,000 for Mirzapore. The route must therefore have been found a promising one.

10. Mr. Muir was also surprised by meeting on the Grand Trunk Road a long string of camels, each bearing two bales, or six maunds of Cotton, and bound for Indore. Agents from Bombay have been busy in Agra and the adjoining Districts making Cotton investments; and a considerable amount is believed to be now taking this direction, attracted, no doubt, by that portion of the Railway already constructed from Bombay towards Central India.

11. The following rates of carriage from Hatrass will shew the comparative cost of the various routes:—

Hatrass to	Amritsur,	1	Rupee	per	maund.
" "	Puttiala,	0	13	4	"
" "	Mirzapore,	0	10	8	"
" "	Calcutta,	2	5	4	"

But the pressure of the present demand, and the great competition for carriage are no doubt raising the cost daily above these rates.

12. It is satisfactory to find that the despatches from Agra by the Railway are on the increase. Since September the figures are as follows:—

October,	Maunds	20,950
November,	"	45,433
Decr. 1st week,	"	8,439
		74,822

To which if we add the quantity reported in my last letter, we have 1,12,500 maunds (above 80,000 cwts.) in about half a year.

This is independent of the large and constant traffic by Country boats and carts.

13. During the last two months about 30,000 maunds are reported by Captain Bird to have been shipped for Calcutta by Steamer, and the remainder by Country boats. But the demand for freight is at present so great that carts are now engaged to go all the way to Calcutta.

14. Palmer and Company have commenced working their Screws at Cawnpore, and are reported to be preparing others at Agra; but Captain Bird states the number of screwed bales that have yet arrived here to be small. The increased value of Cotton has, however, begun to show itself in the more secure and careful manner in which the bales are packed and covered.

15. Captain Bird's Screws at the Jumna Ghat here will be in working order in a few weeks.

16. A copy of this address has been forwarded in continuation to the Chamber of Commerce.

I am, &c ,

G. H. M. BATTEN,

Secretary.

SUDDER BOARD OF REVENUE,
N. W. P., ALLAHABAD.
The 19*th December* 1862.

No. 4.

No. 769.—*From* G. H. M. BATTEN, ESQ., *Secretary to Sudder Board of Revenue, North Western Provinces, to* R. SIMSON, ESQ., *Secretary to Government, North Western Provinces.—Dated Allahabad, the 29th October 1863.*

REVENUE.
Present:
W. MUIR, ESQUIRE.
Senior Member.
and
R. MONEY, ESQUIRE.
Junior Member.

SIR,—I am directed by the Sudder Board of Revenue, North Western Provinces, to submit the following report on the state and prospects of the Cotton crop, in these Provinces, as requested in your letter No. 2810 A, dated 6th August last.

2. The price of Cotton in all the marts throughout these Provinces continued steadily to rise. At the beginning of the year it ranged from Rs. 16 the maund (or about 4¾*d* the ℔) in the Western Districts to Rs. 25 (or 7½*d* the ℔) in the Eastern;—By the sowing season the rates had advanced to about Rs. 20 (6*d* the ℔) in the former and Rs. 30 (9*d* the ℔) in the latter. In the Northern non-producing districts, such as Goruckpore and Gonda, the prices rose as high as Rs. 35 and 40, or 10½*d* and a shilling. The Cotton which used to find its way from the Doab in that direction had been diverted to Bengal for exportation; hence an absolute dearth of Cotton and these extraordinary prices.

3 The following table of the rates which ruled in the chief marts will be of interest —

Date.	Meerut.	Agra.	Furruckabad	Cawnpore	Allahabad	Mirzapore	Ghazeepore
Close of Dec 1862,	16 4	17	..	23	20	15	21 4
„ January 1863,	18 13	21	20	24	20	16	22 12
„ February „	17 12	22	21	25		15	25
„ March „	19 6	20	21	26	22	16	25·99
„ April „	19	20	30	34	24	30	25 10
„ May „	21 5	20	33	32	24	25	25 99
„ June „	24 99	18	29	35	24	25	32
„ July „	24 10	24	32	27	24	26	34 2
„ August „	24 10	28	32	27	25	30	34 2
„ September „	26 10	32	31	27	25	36	34

4 The rain set in early, and to all appearance propitiously, before the middle of June And the effect of the high prices showed itself in an eager desire to extend the area under Cotton cultivation The consequent increase of area sown was above 50 per cent over that of last year, in some places higher, reaching 75 per cent, or even cent per cent

5 But in the Central and Upper Doab, and in parts of Bundlekhund and Rohilkhund, the rain continued almost uninterruptedly to fall for many weeks There were none of those intermissions which afford the necessary respite for the plant to acquire a healthy growth It became generally stunted All the lower lands were flooded, or so saturated with moisture, that the young plant rotted or became too weakly to afford any promise Such land was accordingly ploughed up and re sown (the season for Cotton sowings

having ordinarily passed away) with other autumnal crops. It is of course impossible to state with precision how much land was lost to the Cotton trade from this cause; but in the District of Allygurh it has been calculated that out of 2,56,000 acres originally sown, 83,000, or above 32 per cent. were ploughed up. In some other quarters the proportion is believed to have been even greater.

6. The calamitous result of this untoward weather is, that instead of having a million and a half of acres, possibly a million and three quarters, under Cotton cultivation, the actual area has dwindled down to less than one million and a quarter. The actual figures are 12,17,170 acres as against 9,58,578 acres for 1862.*

7. But even this was not the whole of the injury inflicted; for the crop that was allowed to stand had been seriously effected by the continuous rain. And now, again, at the close of the monsoon, the capricious season was equally unfavorable to a good harvest. For shortly after the middle of August, there was in all the districts west and north of Agra, an entire cessation of rain, and not a drop has fallen since; that is, the monsoon ceased a month and a half before its usual time. In consequence, the plants that were still in a thriving condition have suffered severely from the drought. In the Doab and Rohilkhund, the misfortune has been remedied wherever irrigation from Canals or wells was possible. But in many quarters, and especially on the right bank of the Jumna, this was seldom practicable.

8. There was in store yet another misfortune. In the lower Doab, the rains recommenced about the middle of September, and continued with unusual intensity till the 8th or 10th of October. The cotton fields which were

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* In the Report for 1862, the estimated area was 11,77,000 acres; and the out-turn (estimated at the average yield) a million and a half of maunds. Subsequent investigation showed that the area was only 9,85,578 acres, and the yield owing to the heavy rains of September little more than one million maunds. The details are given in paragraph 11.

there in a highly promising state were greatly injured by this untimely fall. In the district of Allahabad for example, the first flowerings have been destroyed, and the loss is calculated at no less than 50 per cent., in some places even at 75 per cent. In a few of the central districts, the latter rain was not heavy or long continued, and has sensibly benefited the plant.

9. In truth the climate of these Provinces, as the Board have repeatedly stated, is so uncertain and capricious, oscillating between flood and drought, either of which is fatal to a good Cotton crop, that the Government must always be prepared for such results. It is rare indeed that the rains are so measured and well-timed that a full crop can be expected. None of course are so alive to this fact as the cultivators themselves, and hence they are unwilling to risk more than a small portion of their holdings upon chances so uncertain.

10. The flights of locusts, which have infested these Provinces, and evince an unfortunate partiality for the leaves of the Cotton plant, have also done some damage; but the evil has been confined to the special localities where the swarms alighted, and it has not materially affected the general result. In the district of Futtehpoor some villages were visited, and the plants stripped several times, but the late rain has made them sprout again, and a tolerable, though rather late, crop is still expected.

11. Taking all these drawbacks into account, it will not appear surprising, that although the area under Cotton is nearly 24 per cent. above that of last year, the expected out turn is hardly if at all in excess. The details as estimated for each district are given below:—

District.	1862.		1863.		Remarks.
	Area in Acres.	Clean Cotton in maunds.	Area in Acres.	Clean Cotton in maunds.	
Dehra Dhoon, ...	10	6	10	24	
Seharunpore, ...	21,000	34,000	26,800	40,000	The plant is tolerably healthy, and the Collector estimates 44,600 maunds; but as no rain has fallen since August, it will be safer not to estimate above 1½ maunds per acre.
Moozuffernugger, ...	19,000	26,000	25,800	38,700	Ditto ditto.
Meerut, ...	45,000	65,000	67,443	65,225	The crop greatly reduced first by flood and then by drought, also by locusts. But it has been extensively irrigated.
Boolundshuhur, ...	32,528	47,000	47,900	70,000	Collector estimates 87,700 maunds: same remarks as for Seharunpore.
Allygurh, ...	1,35,000	1,64,000	1,72,700	1,78,500	2,56,000 sown; but 83,000 ploughed up.
Meerut Division, ...	2,52,538	3,36,006	3,40,653	3,92,449	
Kumaon, ...	730	730	730	730	Cotton almost unknown in the Hills.

Bijnore,	25 350	38,000	27,500	27,500	Collector though admitting loss by flooding and drought, estimates the out-turn higher but it will probably not exceed one maund per acre
Moradabad	33,600	50,000	45,678	57,000	The crop is reported promising, but drought may injure the out-turn Collector estimates 74,000, but it is doubtful if even 1¼ maunds will be gathered per acre
Budaon	80 000	1,00,000	90,000	81,000	
Bareilly,	26,367	40,000	30,359	25 400	Crop much injured by flood in the northern parts
Shahjehanpore,	9,000	7,000	12,800	9 319	
Terai	877	691	826	934	
Rohilkund Division,	1,75,194	2,35,691	2,07,163	2,01,153	
Muttra,	79,412	1,19,000	94,766	68 976	Collector anticipates that drought may occasion a farther loss of some 10 per cent.
Agra,	87,089	1,25,961	1,07,194	1,00,000	Collector reports the crop to be stunted and likely to yield only one half the average, yet he estimates the produce at 2 lacs of maunds. It will be well if one maund per acre is gathered.
Etah,	33,392	19 430	44,160	17,500	The plant was strong and healthy in September, and the out turn may perhaps exceed the estimate
Mynpoory,	22,780	10,294	31,201	17,737	The drought may occasion a further loss.
Furruckabad,	10,960	14,105	15,235	14,429	The out turn may be increased by late favorable rains
Etawah,	49,959	30,569	58,503	52,450	Ditto ditto, 10,000 acres were flooded and destroyed at the beginning of the rains.
Agra Division,	2,83,592	3 19,359	3 51,059	2,71,092	

District.	1862.		1863.		Remarks.
	Area in Acres.	Clean Cotton in maunds.	Area in Acres.	Clean Cotton in maunds.	
Jaloun, ...	17,633	10,000	14,700	3,200	The crop is thin and poor: but the late rain has benefited it in some places; and the yield may be somewhat better.
Jhansie, ...	14,800	14,000	14,150	12,300	
Lullutpore, ...	1,211	630	1,057	470	
Jhansie Division, ...	33,644	24,630	29,907	15,970	
Cawnpore, ...	55,820	26,219	68,237	32,000	The late rain has benefited the later sowing; but injured the earlier ones. The out-turn may on the whole exceed the estimate.
Humeerpore, ...	40,389	20,000	37,000	18,000	Collector estimated at only 15,400 maunds; but an addition has been made on account of the late rain.
Futtehpore, ...	23,235	14,100	33,000	26,000	The original estimate 30,000 maunds; but a deduction of (say) 12 per cent. necessary on account of late rain. Still the yield may after all be better than expected.
Banda, ...	90,000	51,864	95,900	49,500	The crop in this district benefited by the late rain: and the yield may be better.

Allahabad, ...	18,300	20,000	40,400	24,000	The estimate in the middle of September was 46,300 maunds, but the subsequent unseasonable rain has damaged the crop so greatly that the yield will be little more than one-half of what was expected.
Allahabad Division,...	2,27,744	1,31,683	2,74,537	1,49,500	
Azimgurh, .	..	...	175	55	Cotton generally sown only with other crops.
Mirzapore, ..	4,000	2,000	4,000	2,000	
Benares, ..	236	36	211	30	
Ghazeepore, ...	7,900	1,600	8,735	1,681	
Benares Division, ..	12,136	3,636	13,121	3,766	
GRAND TOTAL, ...	9,85,578	10,57,735	12,17,170	10,34,660	

24

12. On a review of the above table, it will be seen that after all deductions for land sown, but afterwards ploughed up, there is still an area under cotton of 12,17,170 acres as against 9,85,578 acres in the preceding year, the increase being thus 23½ per cent.

13. The estimated produce last year was one million and fifty-one thousand maunds; it is this year estimated at nearly the same, the actual figures being a million and thirty-four thousand maunds.

14. In English weight, the out-turn is expected to be eight millions and twenty-eight thousand lbs. or 74,000 cwts.

15. The Board have no direct intelligence as to the state of the crop in the native states lying south of the Jumna, but they fear that the same causes which have checked the expected increase in our own districts must have operated equally there; or rather, in consequence of the fewer facilities for irrigation, to a more serious extent.

16. Mr. W. A. Forbes, C. B., supplies the following interesting remarks in respect of the district of Meerut:—

"Last year it was my impression that the cotton traders and Bunyas alone had benefited by the sudden and extraordinary rise in prices; that the Rs. 16, 18 and 20 per maund had not reached the pockets of the agriculturists. I am glad to say that this year, as might have been expected, the unlimited demand widens its influence and the poorest cultivator begins to enjoy his share of its advantages. In place of the old advance of 3 and 4 rupees per maund, the Bunyas and money lenders have been obliged to advance 8, 10, and even 12 Rupees.

"At this moment cotton is hardly procurable in the market, but as the new crop comes in, it is expected that Rs. 18* per maund will be the ruling average rate for the season.

* *i. e.*, about 5½ the lb.

"During the year, I have made a small attempt to improve the system of cultivation, and mode of picking of cotton. At the time when the land was being prepared for

the sowings, I issued a translation of some simple instructions I had received on the subject with a parcel of Egyptian seed—a copy was sent to each village in the district, the Putwarees were ordered to read it in every village of their Circles and the Tehseeldars did the same daily in their offices to the assembled zemindars

"*I do not anticipate that much change has taken place* from the old system of sowing broad cast, but I do hope that my advice will induce some to be more particular in the picking of the crop, more especially as I intend to follow it up by the offer of rewards for the best samples produced during the season

17 The Board think that something might be done by Government towards encouraging such experiments as those tried by Mr Forbes There was during the past year, no means available to the Board of procuring any kind of seed for those who felt inclined to make the trial They would suggest that a Depot might be established at Allahabad of the most likely sorts The acclimated New Orleans seed, which has succeeded so well in Dharwar, might be obtained from thence, with specimens of Dr Forbes gins And rewards might be held out for the best field of this or any other variety

18 If no other agency is available to the Government, the Board would be glad to aid in any such movement

19 As on former occasions, a copy has been sent direct to the Chamber of Commerce, Calcutta

I am, &c ,

G H M BATTEN,

Secretary

SUDDER BOARD OF REVENUE,
N W P , ALLAHABAD
The 29th October 1863

No. 5.

[No.]70.—*From* G. H. M. BATTEN, ESQ., *Secretary Sudder [Bo]ard of Revenue, to* R. SIMSON, ESQ., *Secretary to Govern[me]nt, North Western Provinces,—Dated Allahabad, the 16th [M]arch 1864.*

[S]IR,—In continuation of my letter No. 7, dated the 6th [Jan]uary last, I am now directed by the Sudder Board of Revenue, North Western Provinces, to submit the result of the information received in reply to their Circular Order A, dated 12th January, in reference to the apprehension, expressed by the Chamber of Commerce, that the present slackness of demand for European Cotton goods has been occasioned by increased indigenous manufacture.

Present.
W. MUIR, ESQ., *Senior Member.*

2. The general conclusions stated in anticipation by the Board in my former address, are amply confirmed by the returns now received to the above Circular.

3. These returns have brought to light a great mass of information, shewing the causes, varying sometimes in different districts, which have affected the demand for European goods, and also for Native fabrics. The general results will be stated briefly in this letter, but in order to preserve the valuable details contained in the District reports, a copious Appendix has been added containing abstracts and extracts of the same.

4. First, then, it may be stated decidedly, that the diminished demand for English Cottons has not been caused by increased Native manufacture. With few exceptions there has been nowhere any such increase. On the contrary there has, speaking generally, been a marked and distressing contraction of local manufacture. This, from causes explained below, is less observable in the western districts; where perhaps from a sixth to a fourth of the looms in the cities and towns (though not in the outlying villages) have stopped working. But in the eastern districts, the trade has altogether decayed; and within

the last two or three years, the falling off is shewn to have reached a third, and in some districts a half, of the looms; and even of the remainder a large portion are only worked occasionally. The weavers have betaken themselves to agricultural or other labor, to menial service, emigration to the Mauritius and elsewhere, and even to begging.

5. The fact is, that the extraordinary rise of price has affected, *though unequally*, the demand both *for Native* and for European stuffs. The same money only buys half, and often less than half, the quantity of cloth it used to. Among the higher classes, somewhat more money may be now devoted to the purchase of wearing apparel; but the poorer classes (and upon these the market mainly depends) have no reserve funds, and consequently cannot appropriate more money to the purchase of clothes. They are forced to content themselves with less, and to buy the coarser and cheaper sorts of Native manufacture. It is true that the greatly enhanced price of Cotton has enriched its cultivators, but these are merely one class amongst the people; and (as will be shewn below) this class clothe themselves from cotton of their own growth.

6. The enhanced prices, as said above, have diminished the consumption both of English and of Native pieces; but, at least in the western districts, they have affected the English more than the Native. This is remarkable, seeing that as explained in my former letter, the Native goods have advanced in price in a higher ratio than the European;—the increase in the former being cent. per cent., and in some cases rising even to near 200 per cent.; while the latter have risen only from 50 to 100 per cent. One chief reason for this difference is, no doubt, that the Native fabrics are heavier, and contain more cotton;—the cost of production remaining the same, the rise in price is of course greater in the heavier than in the lighter stuffs.

7. In some of the reports this has been overlooked, and it has been assumed that the rise in price of the manufac-

tured article, should have been in the same ratio as the rise in the price of the raw material.

8. The cost of cotton fabrics may be resolved into two elements; 1*st*, price of the raw material; 2*nd*, cost of production, including labour, machinery, carriage, &c. The effect of the rise in the price of cotton will tell differently on the cost of fine light fabrics, and of coarse and heavy fabrics, thus—

First, in the case of light stuffs. Suppose a piece of English and of Native cloth of the same size, and the same weight of cotton; the value of the raw cotton in each case being 8 annas, if the cost of labor, &c., by the Native method were 8 annas and by the English 6 annas, then the price of the Native piece would be 16 annas—that of the English 14 annas. But if the cost of the raw material be trebled, then the price of the Native piece will be two Rupees, and that of the English 1 Rupee, 14 annas. The English piece is still cheaper by 2 annas; but its price has increased 114 per cent. while the Native piece has increased only 100 per cent. The supposed results are tabulated for greater clearness.

Comparative table of price of a fine fabric, same size and weight.

	1860.			1864. Price of cotton trebled.			Increase per cent.
	Cost of cotton.	Cost of labor, &c.	Price.	Cost of cotton.	Cost of production.	Price.	
	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	
English fabric,	0 8	0 6	0 14	1 8	0 6	1 14	114
Native fabric,	0 8	0 8	1 0	1 8	0 8	2 0	100

Suppose, again, that the fabric is of a cheap coarse texture in both cases, but that the Native is twice as coarse and heavy as the English, thus—

	1860			1864			Increase per cent
	Cost of raw cotton	Cost of labor, carriage, &c	Total cost price	Cost of raw cotton	Cost of labor, &c	Total cost price.	
	Rs. A.	Rs. A	Rs A.	Rs. A	Rs A	Rs A	
English stuff	0 8	0 4	0 12	1 8	0 4	1 12	133
Native stuff,	1 0	0 4	1 4	3 0	0 4	3 4	160

That is, the increased value of raw cotton adds to the price of coarse stuffs in a much greater ratio than to that of fine stuffs both because the cost of labor is less, and because more raw material is used A very important addition must also be made to the price of the Native article, for the profit required to cover the exorbitant interest of the capital which the weavers must borrow to provide for this new expense

Hence, it is easy to understand why the prices of the heavy and coarse Native cottons have doubled and trebled themselves

9 What is strange is that while they have increased in prize so much more than English goods, they should still *maintain themselves in the market better than English goods can do* Yet the tenor of the evidence contained in the returns leaves no doubt on this head The consumption of the Native goods has diminished in consequence of the increased price, but the consumption of English goods has diminished in a far greater measure In this view the Native goods have to some extent, and in a certain sense, taken the place of the English, yet this has been not in consequence of increased, but in spite of very considerably diminished, production

10 The reasons assigned are various It is alleged that notwithstanding the relatively greater increase of its price, the cost of the coarse Native article is *still consider-*

ably less than that of any English stuffs that would answer the same object.* It is held that the Native article is more durable, thicker, warmer, and better suited to the wants of the people in these Provinces; and that Lancashire must produce a coarser, thicker, and cheaper article than it does at present, before it can compete in this department of manufacture with the Native weaver. It will be seen that there are also other opinions at variance with the above; but the balance of the evidence is against them.

11. An important point strongly brought out in these reports is, that English Yarns, which used to be extensively used by Native weavers for their finer fabrics, are going out of use, and in some places have disappeared,—either through the stoppage of the looms, or supplanted by thread locally spun. The trade can no longer afford to advance the large capital required for the purchase of English thread. The weaver is reduced to work from hand to mouth upon local material. It corresponds with this, that the importation of yarns has largely fallen off within the last two years (see figured Statement below.)

12. Another reason of the slack demand for English goods is, as stated by the Board in their former letter, the tightness of the money market, and the diversion of all available capital in the more profitable speculation of exporting cotton.

13. It is also asserted that the markets were already overstocked by the too brisk trade of preceding years. The following tables abstracted by Mr. W. C. Plowden, from figures given in the *Times* City Article of January 8th, would appear to bear out this assertion. They even show that (omitting the abnormal years of 1858, 1859

* From the various reports in the Appendix, it will be seen that nearly every article of Native clothing can be procured cheaper (though inferior in texture) of local than of English manufacture.

and 1860) the shipments to Calcutta and Bombay are not under, but *above*, the averages of the shipments from 1853 to 1857. It must here be noted that the Chamber should not lose sight of the imports *viâ Bombay*, which find their way into Jhansie, Gwalior, and Rajpootana; and which, with the progress of the Bombay Railway, will continue daily to push their way up more and more, and displace those from Calcutta.

Statement shewing in millions and thousands (hundreds omitted), the trade in plain Cottons and Yarns to Calcutta and Bombay.

	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
Plain Cottons shipped to Calcutta in yards, ...	147,933	247,063	211,351	246,727	200,765	377,847	459,724	365,232	377,278	246,?45	19[illegible],069
Ditto to Bombay in yards,	113,258	170,647	117,343	113,026	111,369	221,623	265,367	222,573	232,221	148,564	191,49
Yarns shipped to Calcutta in lbs, ...	15,259	15,622	16,901	15,101	10,685	15,315	21,019	16,392	[illegible]	[illegible]	10,524
Ditto to Bombay in lbs, ...	6,849	7,668	7,126	4,559	2,535	8,636	12,896	4,570	5,578	1,811	3,392

Similar Statement—the returns for Calcutta and Bombay being shewn together.

	1853.	1854.	1855.	1856.	1857.	1861.	1862.	1863.
Plain Cotton yards, ...	261,191	418,277	361,691	359,753	311,274	399,190	395,660	391,699
Cotton Yarn, lbs, ...	22,108	23,190	24,327	19,663	13,528	19,511	[illegible]	15,986

14 It has been noticed above that the trade of weaving has decreased less in the Western than in the Eastern districts In the former, cotton is extensively cultivated and the cultivators, as well as those who receive cotton from *them by payment in kind, find it more economical to expend* a portion of the crop by whom manufacture for their clothing, than to purchase ready made cloth. The women employ themselves in spinning the thread, and a weaver is hired to make up the piece, or the work is given out to him by the job, and he is paid in cotton It seems to be in this way that a large portion of the population in the western districts are supplied with clothing Hence, also, while the weavers in the larger towns, unable to provide the capital required to purchase material for their trade, *are forsaking their looms, those in the country and outlying* villages are in many cases prospering

15 In the Benares Division and Goruckpore, however, *where hardly any cotton is produced, and in other quarters*, as Allahabad, where it is sparingly cultivated, the same facilities for employment are not afforded to the weavers Where no cotton is grown, there can be no home manufacture without the purchase of cotton, and the present rates are almost prohibitive Consequently the manufacture languishes, and the production of indigenous fabrics has greatly diminished, both in towns and villages Hence, in the Eastern districts the consumption of European goods must be materially greater than in the Western.

16 The proportion of the crop which is retained for domestic use is variously estimated at from one fourth to one sixth Taking the produce of these Provinces at 8,000,000 lbs,* it may be assumed that at least a million and a half to two millions of lbs were consumed in the several districts which produced it, and about six millions exported.

* See the Board's report No 769 dated 20th October last.

17. By far the greatest portion of this, as well as of the cotton grown in the adjacent States of Bundlekhund and Rajpootana, is transmitted *viâ* Allahabad to Calcutta, by Boat, Steamer, Cart, or Rail. It was noticed last year that a despatch was sent from Hatrass *viâ* Dehlie to Umritsur for exportation from Kurrachee. The experiment does not appear to have been repeated in the present year, and was probably not found to answer.

18. It was also stated that last year cotton was exported from Hatrass and Agra to Bombay. The exportation in this direction has considerably increased in the present year, and it has taken a variety of routes. From Hatrass 5,700 maunds, or about 4,50,000 lbs. have been despatched *viâ* Indore: and from the Muttra District 7,550 maunds, or above 6,00,000 lbs. From Mirzapore about 1,300 maunds (1,00,000 lbs.) were exported partly by Indore and partly by Oomrawuttee. From Calpee about the same quantity was sent *viâ* Jhansie and Indore.* A considerable amount is said to have been despatched from the southern parts of Bundlekhund *viâ* Jubbulpore and Oomrawuttee to Bombay: which circuitous route, it is alleged, is taken to avoid the exactions of the Gwalior Officials. This is the first year in which the tide of cotton has set in this direction; it used before invariably to flow *upwards* from Central India to Mirzapore and Calcutta. Now it takes the opposite direction. No doubt the return carriage will be laden with cotton stuffs and other goods, and bring Bombay into closer competition with Calcutta for the supply of Central and Upper India. Some details of the costs of the route

* This venture was met by Mr. Muir on the Calpee road near Jhansie, laden on about 300 Camels. These belonged to a Cabool Merchant, who, after selling his fruits, contracted to carry the cotton in five weeks to Indore at 2-8 or 3 Rs. a maund. Cotton was never known to take this route before. It was despatched on account of a Mirzapore Merchant to meet an engagement at Bombay. The whole quantity despatched from Calpee this year was about 50,000 maunds which, with the above exception, went to Mirzapore. In the Calpee district the Merchants contracted with the cultivators at the sowing seasons for cotton at Rs. 20 a maund, helping them with advances.

to Bombay, which at present is far more expensive than that to Calcutta, are given in the Appendix

19 It will be observed that no substances are used for admixture with cotton for the purposes of weaving The produce of the Semul* or cotton tree is occasionally employed for quilting coverlets, padding clothes, stuffing pillows, &c, but it is not suited for the loom

* Bombax Heptaphyllum.

20 Other substitutes are resorted to for clothing Even hempen stuffs are mentioned as used for this object The woollen trade has received an impetus, and blankets have greatly advanced in price * Indeed the extreme scarcity of clothing is every where attested, a curious evidence of it (as well as of the perverse fancy of the people) is adduced by Mr Ousely in the rumour that the Government were withdrawing the cotton crop, in order to substitute clothing of leather, which would injure their caste!

A copy of this report has been sent, as on former occasions, direct to the Chamber of Commerce

I have, &c,

G H M BATTEN,

Secretary

ALLAHABAD,
SUDDER BOARD OF REVENUE,
The 16th March 1864

* A curious indirect result of the cotton famine has been to encourage farms of sheep, see the report of Mr H D Robertson for Seharunpore

APPENDIX.

ABSTRACT OF REPLIES TO THE SUDDER BOARD OF REVENUE CIRCULAR ORDER A, DATED 12TH JANUARY, ON THE MANUFACTURES OF NATIVE COTTON CLOTH.

N. B.—The information is arranged territorially from North-West, the cotton-producing quarter, to South-East the non-producing.

MEERUT DIVISION.

Dehra.—Little or no weaving.

Seharunpore.—Looms at work in 1860,	... ...	10,118
Ditto ditto, 1863,	... ...	8,883

Of 7,383 weavers, 1,560 are said to have betaken themselves to other employments. The total crop of the district is about 36,000 maunds, of which it is estimated that 8,650 maunds, or about one-fourth are retained for domestic use.

Mr. H. D. Robertson writes—

2. "When the price of the raw material first increased considerably, there was a general panic amongst the weavers, and most of the looms in this district secured little work, the general impression amongst Natives being that English manufactures would drive the country cloth entirely out of the market. The weavers had for many years been using English thread for the manufacture of all the finer kinds of cloth; and when prices first rose, this description of manufacture almost ceased to exist, and it was sometime before the Native weavers perceived that with the rise of prices the tastes of the people would change. There seems to be little doubt that imported cloth is now purchased in very small quantities, and its use confined almost entirely to the wealthy classes. Though the demand for country-made cloth has diminished by about one half, this half represents nearly the whole of the cotton cloth that the residents of this district can

at present afford to purchase. Country cloth made from country thread, though quite as expensive (or perhaps more so) as English cloth, is found by the large mass of the population to last longer and to be more economical than English cloth, and hence the preference given to country manufactures. English cloth will doubtless possess greater advantages over Native manufactures in districts which are not so far removed from the Sea.

3. "The rise in the price of cotton has not, as far as it is possible to judge, been the cause of any serious amount of suffering to the weaver population, though for several months at first the weavers seem to have been very generally without work, and unwilling to engage in other occupations, till all their former savings had been expended. But hardly had this necessity arisen, when the Native purchasers shewed a preference for country cloth, and the weavers began to secure regular employment, though to a limited extent, in their ordinary occupation. Land for cultivation is easily secured in this district, and weavers frequently became cultivators on a small scale, though carrying on their regular trade as opportunity offered. I found considerable numbers of weavers during the rains of 1863, working on the district roads as coolies, but their attendance was evidently of an uncertain character, depending entirely upon some temporary pressure of no very great consequence.

4. "In conversation with weavers, I noticed that one rather remarkable change had been effected in their social position, in consequence of the rise in the price of cotton. Formerly the weavers in this district generally purchased the thread on their own account, ultimately realizing the profits derived from the sale of the manufactured article. Since the rise in the price of the raw material, it appears that the weavers have, as a general rule, been unable to do this, and that they have consequently now assumed the position of daily laborers employed by Shopkeepers

and Merchants who supply the thread and make their own profits on the cloth. The zemindars and even cultivators are also turning their attention to this new source of profit by engaging the weavers as laborers for the manufacture into cloth of a portion at any rate of their cotton crops. The weavers naturally feel this change has rendered their position by no means so independent as was formerly the case, and I generally found that they viewed this as more serious than the loss of income which has undoubtedly been considerable.

5. "The high price of cotton cloth has caused a corresponding increase in the value of Native woollen manufactures, which are now more generally used and have more than doubled in price. The consequence is that sheep are becoming a favorite description of property amongst the better class of villagers, and hence one cause of the difficulty at present experienced in this part of the country in securing sheep for the use of our European troops. Though the Natives are unwilling to acknowledge it, enquiry has convinced me that the stock of sheep is increasing rather than diminishing in this district; but at present the anxiety to possess this description of stock on account of the value of the wool, checks their introduction into the market, though eventually this will doubtless not be the case."

MOOZUFFURNUGGER.—Mr. S. N. Martin reports—

1. "Slackness in demand for Manchester cotton manufactured goods is due purely to the high prices of these articles. The chief seller in this market tells me, that goods which cost him last year Rs. 100 now cost Rs. 130, and brown holland Rs. 150, or 50 per cent. more, Whereas a year previous his monthly sales amounted to Rs. 200, he now sells only Rs. 100 worth of goods.

2. "The deficiency in the consumption of Manchester goods is not supplied by extra consumption of country manufactured cloth, because the price of cotton is too

dear to admit of much profit to the manufacturer The Joolahas or weavers finding the trade so unprofitable, have largely taken to daily labor on roads, canals, &c, and for the present have deserted their looms Other weavers, I fear, are joining the criminal class of thieves. *The number of weavers in this district amount to 10,000,* and taking the average of one to a loom, there will be as many looms, but as I have said above, there is reason to believe many looms are not working, for instance, in the town of Moozuffurnugger, when prices are favorable there are 100 *looms at work, but since the great rise in prices,* 40 looms have been abandoned So also in the villages of Ameernugger and Churthawul Of this district there are 400 looms, at present about half are at work Nor is there any reason to suppose that manufactures from coun *try made blankets of sheep wool have supplied the wants* of the people in the cold weather Wool has be come far too expensive also, and thus the high price of cotton is reacting beneficially upon this trade, for al though more blankets may not be manufactured, still the artificially high prices have immensely benefited the shepherds who weave blankets When I joined this station in March 1862, a country blanket cost 1 8 to 1 12, the same article now costs Rs 3, and is rising in price

3 "The price of cotton has recently *fallen from* Rs 28 per maund to Rs 26 per maund, and it is anticipated that if the price should continue to fall not only will the weavers return to their looms, but the demand for manu factured goods will also become more brisk Just now people are wearing out their old clothes, but as soon as the prices are lowered there will be fresh purchases, they *cannot go on wearing rags, and taking the total population* of this district at 5,60,174 souls, or 354 to the square mile, it is clear the country looms cannot meet the wants of this population

"*P. S.*—Besides the regular weavers who pursue no other occupation, there are others who make their living partly by labor and partly by weaving at so much a *thân* for private parties. It is difficult to ascertain the number of this latter class without making a more elaborate enquiry than the limited time will admit of. I am told that in many villages weaving is thus done privately through a domestic at four annas per *thân* of 16 yards, the material being supplied by the employer. When there is no call for country cloth by the resident families, then these weavers revert to agriculture or to daily labor.

MEERUT.—Mr. W. A. Forbes, C. B., who has displayed the deepest interest in the new phases of the Cotton trade consequent on the convulsions in North America, and in experiments for the growth of a better staple in India, writes as follows:—

2. "The delay which has occurred in the submission of this report, was owing to the difficulty in obtaining replies on various points from the Tehseeldars, who on their part have gone into the subject with zeal, and were anxious to get the most correct data in their power.

3. "The result has certainly astonished me. It happened that, when the Circular reached me, I was in Camp, at a town named Fureednuggur in the Tehseel of Ghazeeabad, and it happens to be almost the only town in which the number of looms have greatly decreased. The facts there found existing, seemed to confirm my pre-conceived impression, that the weavers, in consequence of the extraordinary rise in price of cotton, were like their Lancashire brethren, suffering from a cotton famine. But as I moved about the district, making personal enquiries, I found that such was not the case, that the depression of trade at Fureednuggur was caused by some local influences, not affecting other towns in the same degree, if at all. The returns and reports from my Tehseeldars now show satisfactorily that things are not so bad with them as had been expected.

4 "The statistics are thus shewn for the whole district in the form prescribed

NUMBER OF LOOMS AT WORK

1860	1861	1862	1863
10,755	10,256	10 529	10 544

5 "*On receipt of your Circular, I forwarded to each* Tehseeldar a form in the above shape, and the following five questions, to which they were to confine their attention, and reply briefly but clearly, with instructions to go in person through the larger towns and collect information from the headmen of the weaver class The questions and the substance of the information acquired are shown opposite each other marginally, thus—

6 Before the price of cotton became so high, how many looms were engaged at work?	The number of looms have slightly increased, but to no great extent
Have they decreased by reason of rise in cotton If so, what employment have the weavers taken to?	In fact since 1861, the weaver classes have been recovering themselves from the Famine year, which fell particularly heavily upon them, and the rise in Cotton has not affected them to any extent, so as to retard their improving condition, where looms [illegible] been working a short [illegible] weavers have taken [illegible] in some instances, [illegible] are not stopped [illegible]
7 What change has taken place in the price of the different kind of	The price of [illegible] Native cloth [illegible] doubled. [illegible]

Native cloths by reason of the high price of the raw material?

Is there a smaller or larger manufacture of Native cloth?

Has English cloth risen in price, and to what extent?

cotton goods have also increased in price; but not in the same proportion.

The finer cloths have increased one-third in price only; whilst 'Markeen,' which was chiefly in demand, being stouter and warmer, has been doubled in price like the Native.

The manufacture of Native cloth has to a certain extent diminished, so that the looms are working short time in some instances.

For the Market—it has enormously decreased.

To order—for home consumption, it has largely increased.

The Native does not understand that, from the greater profits he makes on his growth of cotton, he should be ready to meet the increased price of his clothing.

The price of raw material and manufactured cloth rising equally, he pockets the profits on the one hand, and at the same time reduces his Draper's bill.

Even for his necessary requirements, he reserves from the market a small portion of his cotton produce—his family makes *it into* thread, and he then takes it to the weaver, who *to order* and at certain fixed rates of labor, makes it for him into cloth.

This custom, which is now followed by all the agricultural classes, helps to keep the looms at work, but keeps buyers from the market

Again, of those wearing English cloth, 80 per cent clothed themselves in what is called 'Markeen,' which like the Native manufactured article has been doubled in price, at least 50 per cent, cannot afford to pay the double price, and fall back upon the Native article, which though costing twice what it did, is still far cheaper than the English

Natives also of the better class, who were in the habit of clothing themselves and their families in English fabrics, now fall back upon the Native article for their children at least, if not for themselves One of this class said to me—"Instead of giving my children new clothes at fixed intervals, I now only give them when the old ones are shabby and worn out

All these circumstances tend to reduce the demand for English goods, and though they perhaps do not quite make up to the trade for the reduced consumption (undoubtedly the result of the high price of cotton), yet it keeps the looms in work.

for the market has a large amount of old refuse cotton mixed with it There is neither the same warmth nor wear in it

11 "From the above we may form the following conclusions —

"*1st*,—That the consumption of cotton goods, both English and Native manufactured, has diminished since the great demand for, and extraordinary rise in price of, the raw material

"*2nd*,—That from various causes, notwithstanding the increased price of Native manufactures, the looms find a fair amount of employment, and that the high price of cotton has reduced the number of consumers of English manufactures, thereby in a great measure making up to the Native weavers for the smaller consumption of cotton goods

"*3rd*,—That as yet the amount of cotton required for home consumption has been kept back to meet the system of manufacturing *to order* —and

"*4th*,—That if Manchester wishes to compete thoroughly, and drive the Native manufacturers out of the field, it must send to India a thicker, coarser, warmer, and cheaper article than it has hitherto done The poorer agricultural community do not want our fine long cloth, and in order greatly to increase the demand for Manchester goods, a coarse warm cheap cloth must be supplied At present the wealthier and higher classes of Natives only purchase the English article To tap the demand amongst the lower classes we must bring something to them adapted to their wants and means

BOOLUNDSHUHUR —Mr H G Keene says—

"It appears that the numbers of the weaving population have undergone a diminution from 5,400 to 4,600 But it is probable that this by no means represents the actual falling off in the consumption of cotton, since it is a mat

ter of notoriety that not much more than one-third of the cotton produced in this district used to be exported, whereas last year it is estimated that scarcely one-fourth was retained. The Native looms were kept working by small commissions, and were partly supplied by old cotton picked out of quilts. The price of woollen cloths and blankets has also risen.

3. "It appears probable that the people of these Provinces, with something of commercial instinct and more of superstitious love for silver, are holding back from taking English piece-goods in the hope of an ultimate fall in the price. The use of temporary expedients must, however, come to an end, and the great increase of specie among the people will enable them to pay higher prices for piece-goods than they are at present disposed to think possible.

4. "It may therefore be confidently anticipated that the gloomy prospects deplored by the Chamber of Commerce will not be lasting. When once the glut resulting from years of over-production has ceased, and stocks fall below the exigencies of the community, a demand ought at once to spring up. The exceptional circumstances above referred to have prevented this taking place so soon as, on abstract grounds, might be expected; and have interposed an unexpected obstacle in the recourse to blankets and quilts.

5. "This, however, cannot last for ever; and it stands to reason that when men find themselves in the possession of superfluous cash, they will sooner or later be obliged to expend it in the purchase of such a necessary of life as clothing, at prices remunerative to the manufacturer.

6. "Although many of the weaving classes have been temporarily absorbed in the cultivation of the fields, and other branches of labor, their stock in trade is so simple that they could at any time resume their hereditary occupation. But I believe it will be found in practice that

they will not do so as long as the raw material continues dear, for they consume much more in proportion than the Manchester men with their mechanical facilities and their lighter fabrics

7 "If the above views be correct, it will be found that the present drain of specie is a mere step, however inconvenient, and that the balance of trade will soon be restored to its normal state

ALLYGURH —1861,	Looms at work,		3 227
1863,	Ditto	ditto,	2,647

In the towns of Coel and Hatrass the numbers *increased*, thus—

1861,	920
1863,	1,141

Mr J H Prinsep reports that the above figures give, for the principal towns of the district, "a rough comparison of the number of looms said to have been in work during the past four years, exhibited in the form required by the Board The figures shew contrary results in Coel, as compared with the other towns Ever since the disturbances of 1857, the weavers have been sensibly increasing in numbers and continuing their trade, in spite of the depressing influence upon it of the high price of cotton, and diminished demand for manufactured cloths Formerly Coel and Attrowlee both possessed a good name for their 'durrees and cotton 'galeechas, the weaving trade of Attrowlee is confined now to Native cloths, whilst Coel is striving to right itself In both towns, as well as in Hatrass, there appears no falling off in the number of looms at work, on the contrary an increase, but the figures shewn must be taken as an approximation only The weavers feel the commercial pressure in the fact of customers limiting their demand to actual want, and denying themselves spare sets of clothing The rise in price of cotton has caused a proportionate rise in the price of manufactured Native cloths,—this naturally affects the quantity of sales, but the price of grain and necessaries

of life remaining uninfluenced by the dearness of cotton, the weavers have been enabled to carry on hand to mouth subsistence, and have persistently stuck to their looms until driven away by sheer hunger.

3. "The suffering has been greater among the weavers of Iglass, and the other places mentioned in the Statement. Famine first drove them from their homes in large numbers in 1861, and the dearness of cotton in the two following years has compelled them to seek employment in the fields in Public Works Department as day laborers.

4. "Scarcity of food in the famine year, as a rule, bore with far greater severity on the weaving population than the present dearness in price of the main staple of their trade has done. It was a noted fact that the larger proportion of emaciated hunger-stricken applicants for food at our relief kitchens in 1861, belonging to market-towns were those of the weaving classes.

5. "Cloth-dyers are said to have suffered from the cotton prices restricting the demand for colored goods, but printers are not so much affected by them.

6. "The following tables may be useful in conveying a better idea of the state of the weaving trade of this District, which though not extensive when compared with other localities in India, has been subject to similar causes of depression. The information may help in arriving at general statistical results.

7. "The *Mahomedan* weavers or 'Jolahas,' make 'dhoturs,' 'pugrees' and 'arrah' cloths, principally of English ball thread.

"A dhotur of 24 yards long and 12 girahs wide, was formerly from 12 annas to one rupee 8 annas a *thân*; it sells now from Rs. 1-8 to Rs. 2.

"A pugree costing 5 annas to R. 1, now sells at 8 annas to 1-8.

"'*Arrah*' cloth of colored thread, which was 11 annas and 12 annas, now sells from Rs. 1-4 to Rs. 1-6.

8 "The *Hindoo* weavers, or 'Kolees,' manufacture mostly 'guzzee,' 'gara,' and 'tookree' cloths of Native thread

"*Guzzee* of 100 yards long by 8 girahs width, used to sell at Rs 4, and now sells for Rs 8

"*Gara* at Rs 1 8 to Rs 2, now sells from Rs 2 to Rs 3

"*Tookree* of 12 yards long and 11 girahs width, the common article of vend at village marts at from 11 annas to Rs 1 4, is now sold at Rs 1-4 to Rs 2

9 "Compare the above with the prices of European piece goods, and it will be seen there is a still greater rise in the value of the latter (?) during the past two years, while in the year of famine 1861 and following year, there was a considerable fall Native thread too, in the famine year, was cheaper than in the year before, but has become dearer and dearer each subsequent year, until it is now more than double the price of 1860 English thread on the other hand has been steadily rising each year from Rs 3 and Rs 3-4 a bundle of 10 and 12½ "uttees respectively, in 1860 to Rs 7 6 and Rs 7 2 in 1864 I have given examples of the two sizes, Nos 40 and 50 of English thread

Year	Hindustani Thread (per rupee)						English Thread			
	1st Class		2nd Class		3rd Class		Bundle of 10 uttees weighing 200 tolahs thread No 40		Bundle of 12½ uttees weighing 200 tolahs thread No 50	
	S	C	S	C	S	C	Rs	A	Rs	A
1860	3	0	2	8	2	0	3	4	3	0
1861	3	2	2	10	2	0	3	8	3	4
1862	2	14	2	4	1	8	3	12	3	8
1863	2	0	1	8	1	0	7	4	7	0
1864	1	4	1	0	0	10	7	6	7	2

Year.	"Markeen," piece of 40 yards long by 1 yard wide.			Long-cloth, 40 yards by 1 yard.			Nainsookh 20 yards by 1 yard.		
	1st quality.	2nd quality.	3rd quality.	1st quality.	2nd quality.	3rd quality.	1st quality.	2nd quality.	3rd quality.
	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
1860, ...	7 8	8 12	10 0	7 8	10 0	12 8	2 8	5 0	8 12
1861, ...	6 14	8 2	9 6	6 14	9 6	11 14	2 3	4 11	8 7
1862, ...	6 4	7 4	8 12	6 4	8 12	11 4	1 12	4 6	8 2
1863, ...	8 12	10 0	11 4	8 12	11 4	12 8	3 2	5 5	9 1
1864, ...	11 4	13 2	14 14	10 0	12 8	17 8	4 1	6 4	10 0

10. The increasing dearness of European manufactured cloths has restricted many who would not otherwise wear them to Native-made goods, which are generally pronounced by them to be thicker and warmer owing to the greater coarseness of the thread used, and better adapted to the native mode of washing, hence more durable also. This will mainly account for the great abatement, referred to by the Secretary to the Bengal Chamber of Commerce in his letter to the Secretary of Government of India, of the 13th October 1863, in the usual demand from the Upper Province for Manchester Cotton Goods. There is not a doubt, that notwithstanding the high price of Cotton in India, it admits of being manufactured into cloth at a less cost than that paid for Manchester Goods, and therefore in the present juncture is preferable to the mass of the people. This, moreover, goes to explain how the weaving classes are kept employed in the present hard times at their old occupation; and infinitely large as the export trade in Cotton has been during the two last seasons, still one-fourth of the raw material may fairly be put down as the quantity,

consequent on the vastly extended cultivation of the plant, retained *for home consumption and domestic* manufactures.

11. "The persons who have most felt the effects of the dearness of cotton are in the poorest classes, some have taken to wearing woollen stuffs as cheaper, where procurable in larger quantities, and many have picked their old cotton stuffed clothing and quilts, and sold the cotton for good prices.

12. "The above information on the ruling prices is reliable, having been obtained from the weavers themselves, and from the leading cloth merchants of Coel."

ROHILKHUND DIVISION.—Mr. J. D. Inglis, the Commissioner of this Division, writes: "From what I can gather from the leading traders here, I should say that at least one-fourth of the looms have been shut up, and the weavers forced to seek other employment.

4. "The decrease in the number of weavers appears to have been caused:—

"*1st*,—By the fact that the price of country cotton cloth has not increased in the same proportion as the price of cotton,—so that it is more remunerative to export the raw material than to return it for manufacture.

"*2ndly*,—To the decrease in the profit gained by the weavers. Formerly their profit was four annas in the rupee, now owing to the high price of cotton, their profit is not quite two annas in the rupee.

"*3rdly*,—To the diminished demand for cotton stuffs owing to the price which places them beyond the means of the mass of the people.

5. "The decrease in the quantity of Manchester Cotton Goods, imported into this district is, I believe, owing to the high prices ranging, and not to their having been superseded in the market by the native-woven article.

6. " In this city the price of Manchester Cotton Goods has risen as follows :—

1st Class Cotton Goods,	...	...	75 per cent.
2nd Ditto,	...	...	50 ditto.
3rd Ditto,	...	...	12½ ditto.

7. " The Octroi returns shew that during the last six months of 1862, the value of Cotton goods imported into the city of Bareilly was Rs. 307,500, and for the same months in 1863, the value was Rs. 3,03,340, shewing a large falling off in the quantity imported, although the value is about the same.

8. " Before the American war, cotton was not exported from the Bareilly district, all that was grown being used for local consumption. Since the war, cotton has been exported largely, but not to such an extent as from the other districts of the Division, or from the Doab.

9. " Large importations of Woollen goods were brought from the Kukora Fair, but I do not find that the people generally have taken to woollen clothing instead of cotton. The wealthier classes may have done so, but it has not yet become general.

Terai District.—Looms have increased from 318 in 1860, to 405 in 1863.

Bijnore.—Mr. J. Palmer gives the following abstract of the looms at work in his district, which he believes to be tolerably correct.

TEHSEELEE.	1860.	1861.	1862.	1863.
Bijnore, ...	201	306	593	421
Chandpore, ...	1,822	1,350	1,051	1,084
Dhanpore, ...	2,553	2,382	2,328	2,294
Nugeena, ...	2,471	2,147	2,047	1,993
Nujeebabad, ...	2,661	2,616	2,002	1,957
Total for the District, ...	9,711	8,801	8,021	7,749

"It will be observed from the above table, that except in the Tehseeldaree of Bijnore, where so little cloth is manufactured as to render its statistics comparatively unimportant, there has been a gradual slackening of the weaving trade from 1860 to the present time. I am induced to think, that it is attributable in some degree to the results of the famine of 1860, and an epidemic which prevailed in Chandpore and Dhanpore during the year 1862; but latterly no doubt to recent rise in the price of the raw material. The weavers generally, who have left their ordinary employment, have betaken themselves to manual labor as carpenters, masons, and field laborers.

3. "It is not I think possible to ascertain speedily and correctly what proportion of the raw material is absorbed by local manufacture in this district. There are no large capitalists engaged in the trade, which is carried on by village weavers who either purchase their thread at the neighbouring markets, or manufacture material supplied to them by purchasers; and who, on an average, make an annual profit not exceeding Rs. 30 or 40 per loom. Generally speaking they use country thread only: but in the neighbourhood of the larger towns of Dhanpore, Nugeena, and Nujeebabad, a certain portion of English thread was also used for the manufacture of cloth for pugries and doputtas: but the recent rise in price of the latter has now driven it entirely out of the market.

"*English Thread.*—Price per skein of two seers, weight at 80 tolahs the seer.

		1861.			1862.			1863.		
1st kind,	...	Rs. 4	4	0	Rs. 8	0	0	Rs 10	0	0
2nd ditto,	...	3	8	0	7	0	0	9	0	0
3rd ditto,	...	3	0	0	6	0	0	8	0	0

"The proportion in which English thread was formerly used, and the effect of the rise in price may be gathered from the fact that in the town of Nugeena, up to close of 1861, about Rs. 4,000 worth of English thread was consumed, and about Rs. 28,000 worth of country thread; in 1862, the consumption of English thread in the same town fell to about Rs. 500; and in 1863, it has not been used at all.

4. "The effect of the enhanced cost and increased exportation of raw cotton upon the price of country thread has been stated to me by some of the chief cloth merchants of Nugeena and Nujeebabad as follows:—

	Description.	Price per Rupee.	
		Former.	Present.
Comparative price of Country Thread.	1st kind, "Tumhiya," ...	4 to 8 chittacks.	3 to 5 chittacks.
	2nd ditto, "Ghala," ...	8 chtks. to 2 seers.	8 to 12 chittacks.
	3rd ditto, "Rooa," ...	3½ seers.	1 to 1¼ seer.

In explanation of this it should be added that the cheaper kinds only are in common use.

5. "The effect upon the price of cloth may be estimated as follows:—

"English cloth is stated by the local merchants to have advanced in the proportion of 4 to 7: and country made cloth in the proportion of 4 to 9. The result has been a diminished demand for English cloth: the demand for country cloth remaining as yet about the average of ordinary years; but the general amount of purchases of both kinds taken together being perceptibly, though as yet not very considerably, reduced. The above statement is, in the main, confirmed by other enquiries made through my Tehseeldars; who all agree in estimating the enhancement in price of country cloth at about 150 per cent. They state,

generally, that less money is spent upon clothes than formerly owing to the rise in price; and all agree in representing the pressure upon the lower classes to be very severe; although as the period during which the price has become almost prohibitive to them is still recent, no visible effect has been produced as yet in the cloths which they actually wear.

6. "It seems certain that the bulk of last year's crop has been delivered for exportation; and that nowhere are there any very large stocks on hand, where such exist they are retained by speculators in expectation of a still further rise, and not for the purpose of manufacture.

7. "On the whole, I am inclined to think that the rise has been too recent, and its results of too short duration for the formation as yet of a clear idea as to its probable results upon local manufacture, or upon the general habits of the population. Another year, if the same rates are maintained, will afford indications which will form a surer basis for judgment than any data that we now have. This much is certain, that up to the present time there has been no tendency to increased local manufacture; but on the contrary, that the higher prices have produced to some extent, although by no means in a corresponding degree, a stagnation in the local trade."

Moradabad.—Looms have fallen from 11,721 in 1860, to 10,147 in 1863; but the decrease is ascribed to the effects of the famine in 1861. In some quarters there has been a slight increase. In the town of Moradabad itself there has been a diminution; and, generally, the weavers who work on their own capital have become embarrassed by the excessive price of the material.

Budaon.—Mr. C. P. Carmichael, after stating that the diminished demand for European stuffs has not been [illegible] by increased Native manufacture, proceeds as follows:—"It stands to reason that unskilled labor can never compete with skilled labor, even with the disadvantages which

the English trade has to labor under of cost of transport in addition to high prices for the raw material in this country. And accordingly, the cloth manufactured by the Native weavers is now selling at just double the price at what it used to fetch in former days. But still the English goods are not so much cheaper as to drive the Native cloth altogether out of the market; indeed, the coarser kind of Native cloth, though dear as compared with its former prices, is still cheaper than the lowest priced English Cotton goods. *

4. "The resources of the people generally have not on the other hand increased in any way, so as to enable them to pay double the price that they formerly did for their wearing apparel, and consequently there has been a marked difference this year in the retail vend of cloth. The cultivating classes, and those portions of the mercantile community who have trafficked in cotton, have done well, and are well to do. But this is not the case with the other classes of the community, who are no whit better as regards their finances than they were in former years. These therefore forego purchases which they cannot afford, or make them on a much reduced scale; and the natural consequence is a falling off in the demand, at their present high prices, of manufactured cotton goods of all descriptions. Certain classes alone have as yet benefited by the high price of the raw material to the exclusion of others; but as a rule, the money market is, I opine, quite as tight up here as it is in Calcutta. And the reason of this is that the speculation in cotton has absorbed all the ready money in the market.

* The Native manufactures of dhotees, pugrees, kummurbunds, loongees, dosootees, guzzee, garah, kharooa, tuttooa, durrees, and cotton ropes, have not been superseded by any Manchester goods, simply because there is no European cloth manufactured of a kind that can take the place of these Native cloths. The people of the country have therefore to purchase these, which are articles of household use and wear throughout the land, at the ruling price of the land. There is no Manchester cloth manufactured even, still less sold, that they can substitute for them.

5 "Not only those who have already traded in the article, and drawn profit from so doing, but others who have also the means to trade, do so now for the first time, and invest every farthing they can spare in the purchase of cotton, and in transporting it to Mirzapore to be sold there at a remunerative rate The returns from this trade are both so much quicker, as well as so much greater, than those from the trade in manufactured cotton goods, that it is no wonder people resort to the former in preference to the latter Any money made by this trade is again at once re invested in it, if not, it is kept in hand for advances to secure this year's cotton crop The cotton trade may be said with truth just now to monopolize the whole market

6 "Native weaving has not increased to any extent as compared with last year, as the Chamber of Commerce would imagine, but neither on the other hand has it decreased to the extent supposed The poorer classes of weavers have of course suffered by the high prices ruling for the raw material, in not having sufficient capital to purchase it But the case has been different with the well to do weavers The large exportation of cotton has not tended to divert labor in any marked manner from native weaving The weavers have merely had to purchase the raw material at the exporting prices and as a necessary consequence, have had to double the prices of their manufactured cloths

7 "The reasons for the decrease in the demand of Manchester Cotton Goods I assign to be two fold (1) The Manchester Cotton Goods are not all of a nature, or priced so low, as to under sell the Native,—a further reduction must take place before this can be effected (2) Capital is so absorbed and sunk in the cotton trade, as to affect in a degree all other mercantile speculations To this may be added, that the high prices now ruling for all sorts of manufactured cotton goods, whether Native or

English, have forced people to be more chary in their purchases of such; and where before they would have purchased without hesitation, they are obliged now per force to be content with what they have rather than incur an expense which it may not perhaps be in their power to afford. This last remark applies quite as much (if not more) to English residents in the country, who were formerly the great purchasers of the better sorts of Manchester goods, as to natives."

Shahjehanpore.—"This is only to a limited extent a cotton-producing district. In the town itself, and the neighbouring villages, the number of looms at work has fallen from 2,077 to 530. In those quarters, on the contrary, where cotton is grown, the looms have actually increased in number, but to a limited extent. Upon the whole they have decreased throughout the district from 5,851 in 1860 to 3,773 in 1863.

Mr. W. G. Probyn reports thus:—"In consequence of the increased price, there has been a great falling off in the consumption of cotton goods, both of Manchester and of Native manufacture. The poorer classes now make the clothes last them two years which they used to renew yearly.

3. "But as cloth of Native manufacture has risen in price proportionably higher than that of English manufacture, so the consumption of it has decreased, and the sale of English is not so much affected as that of Native cloth.

4. "If the above is correct, it would of course account for the great decrease in the number of looms at present at work in the Shahjehanpore and Northern Pergunnahs.

5. "The weavers who have forsaken their looms have generally become laborers and servants. Many Joolahas have now taken the place of Sheikhs and Pathans as private servants with respectable Mahomedan families.

6. "As you are aware this is not a cotton-exporting district. More cotton is cultivated in the western than in

the other purgunnahs, and I believe that in consequence of the high price of goods, the cultivators very generally get their own cotton spun into cloth for home consumption This would account for the increase in the number of looms in those purgunnahs

Bareilly—The number of looms is given at 11,423 in 1860, and 11,213 in 1863 In some places the falling off is considerable, in others (for the same reasons as specified in the preceding remarks) there has been an increase

Mr Dunlop, C B, writes —

"The comparative totals may be useful, but the return is not of much value, I believe, in estimating the amount of weaving performed, as it is impossible to determine the extent of work of each during the year As a general rule some of them have been lying more or less idle, and probably very slack of late, but the general impression *is*, that the weavers have not yet suffered at all by the high price of cotton

"This is not properly speaking a Cotton district, its advantages for, and the superior profits on, sugar make that our staple All cotton grown is required for the wants of the district itself, and a certain amount also annually imported With the exception of a trifling amount from Chundhosee, Pergunnah Anola, I do not suppose that any Bareilly cotton has found its way to the export market

"The price of cotton has changed during the last three years from five Bareilly seers to (a fraction less) one seer per rupee It is true that English drills and calicoes have not increased in price in proportion to the raw material, but looking to their less durable properties, and the necessity for economy in clothing, which its dearness occasions, some Natives who used to purchase English cloths have reverted to the local manufactures

"The price of English 'Markeen is now about double what it was, and the price of native-wove cloth has also just about doubled, thus what the Natives here call

'corah markeen,' or unbleached drill, was formerly procurable at 8 yards per rupee, it is now 4 per rupee; its native equivalents called 'garha' and 'gazee' used to be bought at 16 yards per rupee, and are now at 8 yards; but the loss of profit on manufacture, shewn in the difference betwen a rise of 400 per cent. on raw material, and 100 per cent. only on the manufactured article, is not borne by the weavers in this district, who do little but weave the material supplied by their customers, while the capitalist Buzaz, or cloth merchants, must have purchased the stocks they thus sell before the extreme rise of cotton quotations, and deem the latter temporary only; otherwise as a matter of course they would hold on, making the realization of a profit on their stock proportioned to the value of the raw material *a matter of certainty, if only the urgency of the* demands continued, but this they distrust.

"No attempt has been made by the Natives in Bareilly to substitute any other fibre for cotton in articles of dress; in fact they know of no rough or 'felting' fibres except cotton. The Semul or cotton-tree fibre, and that of the Madar, both of which are plentiful, are useless for all spinning purposes, simply because they are destitute of the rough surfaces which give felting properties to cotton and animal wools, and which are essential to all short staple filaments.

"I have observed that some few of the hill coolies, employed between Kaladoongee and Nynee Tal, have this year entire suits of clothing made of 'Sunn' fibre; but in Bareilly, the only patent effect of the cotton scarcity is shewn in the fact, that the 'ruzai' almost universally used in cold weather by villagers when they can afford it, is now seldom seen quite new, while the use of Semul cotton for padding or stuffing pillows, &c., formerly general, is now universal."

Muttra.—Mr. W. C. Plowden has furnished an elaborate report on the Muttra District, which is subjoined entire:—

2 "This is not a great manufacturing district, nor is it an entrepôt for the disposal of cotton goods, as is Furruckabad and Mirzapore No records existed to which I could refer for information as to the weaving manufactures of the district, and such data as have been collected and are now submitted, have been ascertained through the Tehseeldars, and by personal communication with the cloth dealers and weavers

3 "Two Tabular Statements are appended to this report The first contains, in the form prescribed, a return (A) of the looms at work in the several towns of Muttra, Bindrabun, Areeng, Muhabun, Kosee, Jullesur and Saidabad, during the years *1860, 1861, 1862* and *1863* The second table (B)* gives the monthly average prices during the same years of the principal country manufactured cotton goods and thread, of English piece goods in ordinary demand in the district, of English thread, of raw cotton, and of several different varieties of grain and of provisions which one or other, or in combination, form the diet of the mass of the population The latter statistics were added so as to bring under view the effect, if any, of the prices of food upon the wages of labor employed in the cotton manufactures of the country, and to detect any decrease of difference in the value of money, which if not eliminated from the facts before us, might exercise an undue and unperceived influence on any generalizations to be made from those facts

4 "The first table shows that there has, no doubt, been a very serious falling off in the manufacture of *Native piece* goods The number of looms at work has decreased from 1,343 in 1860 to 868 in 1863, or rather more than 35 per cent As compared with 1859, the decrease in the number of looms at work in 1863 is even more decided, being 923

* NOTE —This table in detail for each month has been abstracted in the Board s Office so as to shew average prices for the several years and in this form is given below

to 1,732, a decrease of 46 per cent. For the falling off evinced in 1860, as compared with 1859, it is not easy to account; but it is most probable that the influence of bad harvests, which culminated in the famine of 1860-61, and which was very much felt in the Muttra district, had throughout 1860, already began to exert itself. But though the decrease in the number of looms at work is thus shown to be very considerable, it is by no means an exact, or even approximate, measure of the actual diminution in the production of cotton fabrics. A large number of these looms, shown as still working, are not in full work; and the general opinion both among dealers and weavers is, that the manufacture of cotton webs has decreased quite as much as 60 per cent. There is certainly not the least doubt that the manufacture of Native fabrics from cotton has diminished one-half.

5. " Considerable diversion of labor has been the natural consequence of this depression of trade. Many of the weavers have now given up their looms for other employments. In Muttra numbers of them have taken service with the paper manufacturers. In the towns in the interior of the district they have found occupation on the roads under construction and repair, on private buildings, and in ordinary agricultural work.

6. " It is observable from this return, that in the small town of Saidabad, the weaving trade has received a slight impetus. The number of looms at work there has increased and not diminished. But this small increase is to be accounted for. Saidabad formerly imported cloth for its consumption from the neighbouring town of Julleysur. At Julleysur not only the cotton manufacture, but trade in all its branches has of late years exhibited general depression; and Julleysur has now ceased to export cotton goods to Saidabad.

7. " An approximate idea of the extent of the depression of the Native cotton trade, consequent upon the late

commercial revolution, may be found in a comparison of the looms at work in 1861 and 1863 The full effects of the severe famine of 1860 61, upon the trade of the country, had been experienced to their utmost limit in 1861, and yet the depression of the cotton trade was in 1863 greater than in 1861

8 "I subjoin a summary of the reports of the Tehseeldars as to the state of the cotton manufacture and consumption of cotton goods in their several pergunnahs

9 "In Muttra, Areeng, and Bindrabun, the great bulk of the cotton crop is delivered for exportation, and only a small portion is retained by the producers Previous to the great rise in prices of cotton goods and raw cotton, a fourth of the crop was retained by the producers for home consumption At present the amount kept back does not exceed one tenth

10 "The production of Native cloth has diminished one third On the other hand the manufacture of country thread has increased and not diminished The ratio of increase is said to be about 25 per cent These apparently contradictory statements are reconcilable The importation of English yarns into this part of the district has almost ceased, English thread was used to a considerable extent in the Native looms, and in consequence of the greatly decreased import of English thread, a larger quantity of Native thread is required for the production of an actually less quantity of Native cloth

11 "The demand for English piece goods, though it is certainly diminished, has not diminished to the same extent as that for Native cloth

12 "In Julleysur, it is said, that little cotton is kept back by the producers, but that the amount so kept back, about a tenth, is not less than the stock formerly retained for home consumption This is a statement, I am not inclined to rely on, and it represents a state of facts

incompatible with the great advance in the price of cotton. On further enquiry, I have ascertained that the Tehseeldar's statement on this point, if correct, is only nominally correct. That portion of the crop, whatever its amount may be, which is retained by the producer, is only retained as a temporary measure: it is used in its uncleaned state to line ruzaies or clothes for the winter months, and is then taken out and sold before the hot weather commences. This being the case, it cannot be said that any portion of the crop is retained by the producer.

13. "In this pergunnah the decrease in demand has been more perceptible in country cloth than in English piece-goods. The consumption of the former article has decreased fully one-half, while the demand for English piece-goods has only fallen one-third.

14. "In Kosee, the results of the enquiries appear to lead to much the same conclusions. A less portion of the crop is retained by producers who now do not keep back a tenth, where formerly they retained an eighth.

15. "The production of country cloth has fallen off fifty per cent., while the demand for English piece-goods has diminished somewhat less. The difference however is slight; the demand for English goods having fallen 3-8ths, and that for country cloth one-half.

16. "In Saidabad very little cotton is retained for home use; and the demand for English goods has not decreased to the same extent as that for country-wove fabrics.

17. "In Muhabun about one-tenth of the crop is retained by the producer against one-fourth in former times. The demand for English cloth has not decreased in the same proportion as that for country goods.

18. "The general conclusions we may arrive at appear to be these—

"A very small portion of the cotton crop is retained for home consumption by the producer; and taking the great

increase in production into consideration, that portion, small as it is, is even less than is estimated in these returns. The demand for Native manufactures has fallen off to a greater extent than that for imported goods. The diminished demand for Manchester goods has been caused by the rise in price, and has not been influenced by an extension of local manufactures. The local manufactures have on the contrary suffered more than imported goods from England.

19. "If high prices continue to rule, there is every probability of a further decrease in the home productions of cotton cloths, as they seem to have been more affected by the rise in price of the raw material than foreign goods. The feeble demand at the seaports for Manchester goods is probably to be accounted for by the large stocks in hand in the interior which have only lately been consumed. There are actually some specimens of English-wove cottons in the bazars now, which have hardly risen at all in price since the great rise in price of raw material; such a fabric is that known by the Native dealers as *(tool)*; in 1860, it was selling for 4 annas a yard. It is now selling at 5 annas, and 5 annas 6 pic. There are still I am told large stocks of this on hand, and the demand is very dull.

20. "Table II., appended to this report, shows that the prices of Native manufactured clothes have more than doubled; thus Guzzee, which in the four years priced was at its lowest value in December 1860, when it sold at 11 annas the piece, has risen to as much as Rs. 1-14-0 a piece in October 1863. So Garha, which was at its lowest price in January 1861, when it sold for 9 annas 6 pic the piece, has risen to as much as Rs. 1-12 0 in October 1863; that is to say, Guzzee has risen as much as 150 per cent., and Garha almost 200 per cent. In point of fact they have risen more than this in price, as the standard has been reduced, the measure of the piece having been clipped and the weight reduced.

21. "On the other hand the rise in price of Manchester goods, comparing them at their lowest and highest values, has not been more than 100 per cent. in round numbers. For instance, Khasa has risen from Rs. 1-11-3 per bale in September 1860, to Rs. 3-9-0 per bale in December 1863, and Long-cloth from Rs. 6-6-6 to Rs. 12-14-0.

"I see that Jean has risen in much the same proportion as country cloth; but it is not generally consumed. Long-cloth is a fairer item of comparison, being in much greater demand among the lower classes than Jean.

22. "The general tendency of the present state of prices is, I believe, to destroy the country manufactures altogether; and not, as is suggested by the Bengal Chamber of Commerce, to expose imported cotton goods to suffer from competition with Native fabrics. The Native productions will, I consider, be eventually driven out of the market by imported goods. This may perhaps be a work of time; but if the prices of raw material continue at their present exorbitant rates, without a large corresponding increase of prices in the manufactured articles imported, country manufactured goods must eventually succumb to imported goods. These the English manufacturer can apparently still afford to supply at prices which have by no means risen in the same proportion as have the prices of goods produced by the Native manufacturer.

23. "It is clear from Table II., that the prices of English imported goods have not risen in the same proportion as have the prices of country goods. It is equally clear, if any reliance is to be placed on the enquiries which have been made by the Tehseeldars, and on the statements volunteered by the cloth merchants and weavers of Muttra, and the neighbouring towns, that the demand for English manufactured goods has by no means decreased in the same proportion as the demand for country manufactured goods. If this state of things continues, and no large rise of prices of English piece-goods occurs, Eng-

lish fabrics must gradually take the place of Native manufactures; and Native manufactures will gradually dwindle away till they are destroyed.

24. "But though English manufactures may and will most probably take the place of Native products, it does not at all follow that there will be an increase of consumption of Manchester goods. The Chamber of Commerce must certainly be prepared for a very diminished individual consumption of cotton goods, at all events for some time to come. It is not probable that there will be a further diminution than has already occurred; for consumers have already curtailed as much as possible the extent of their purchases. Where a purchaser formerly brought four pieces of cloth, he now only buys two or one; but the curtailment in this direction cannot be pushed very far amongst a people who wear so very little clothing, as the Natives of this country. As much as can be done has, I believe, already been effected. None of the lower classes now buy more than they are absolutely compelled, and even men in a better position of life have become equally sparing in their purchases. Some of the merchants, while discussing the matter with me, pointed to their own clothes to show how much consumption had been reduced. Some of them said, that where they formerly purchased an Angurkha once every year, they now restricted themselves to one every other year, or every three years, contenting themselves with patching up their old garments. One of them indeed more pertinently than politely observed that the back did not require as good treatment as the stomach; that while the latter always required a certain amount of food, the former might be docked of its covering to any extent, should prices range so high as to compel this treatment.

"The Chamber of Commerce must not anticipate any immediate increase in the consumption of Manchester goods, at the same time they need not, in this district, apprehend a further decrease in demand, nor have they any thing to

apprehend from competition on the part of Native manufactures.

25. "In conclusion I give, for what it is worth, the information I have received from the merchants as to the *extent of the imports of Manchester goods, and the consumption* of Native manufactures in Muttra itself.

"Before the late rise in prices, the imports to Muttra of Manchester goods are said to have amounted to 1,00,000 pieces, valued at Rs. 5,00,000: the value of the present imports of Manchester goods is still said to be the same, the quantity however having decreased to 45,000 pieces.

"Country piece-goods sold at Muttra are said to have been valued at Rs. 2,00,000 and to have averaged 3,00,000 pieces: about 1,00,000 pieces or less now come in the market valued at about Rs. 1,75,000.

A

Statement shewing the number of looms in Zillah Muttra

Name of Pergunnah	Name of Town	Number of Looms				Remarks
		1860	1861	1862	1863	
Huzoor Tehseel,	Muttra, .	600	400	600	501	In 1859, there were as many as 850 looms at work in Muttra and 139 at Bindrabun In consequence of the great reduction in the number of looms at work, many of the weavers have taken service with the paper manufacturers, of whom there are many in the *Town* Others and especially in the Towns of the interior of the District are at work on the Roads and Railway, or private buildings, and in many cases have taken themselves entirely to agricultural pursuits
Ditto,	Bindrabun,	0	0	0	55	
Areeng,	Areeng,	138	137	120	82	
Julleysur,	Julleysur,	267	187	63	57	
Kosee,	Kosee,	45	24	34	42	
Saidabad,	Saidabad,	8	4	4	9	The looms at work are not doing full work, but about four days work out of the seven
Muhabun,	Muhabun,	285	74	290	177	The *piece* produced in the looms has been reduced in Standard measure and in weight since the rise in prices Native manufacturers have diminished as much as 50 per cent and probably more In Bindrabun the *number of* looms at work in 1860, 1861 and 1862 is not known
	Total, .	1,398	826	1,111	923	

Statement shewing the average prices of Cotton, Cloth, &c., in the District of Muttra.

Year.	Looms or Gadh.	Country Cloth.*		Country thread per seer.	English Piece-goods.			English thread per seer.	Raw cotton per maund.	Provisions per Rupee.						
		Guzzee per bale.	Garah per thân or bale.		Khasa per bale.	Long-cloth per bale.	Jean per yard.			Wheat flour.	Gram flour.	Barley and gram flour or Bejur.	Dal.	Ghee.	Rice.	Meat.
		Rs. A. P.	Rs. A. P.	A. P.	Rs. A. P.	Rs. A. P.	A. P.	Rs. A. P.	Rs. A. P.	S. C.	S. C.	S. C.	S. C.	S. C.	S. C.	S. C.
1860,	600	0 12 5	0 12 0	5 9	1 14 3	7 0 1	3 7	1 12 2	8 9 6	16 0	19 13	19 1	14 4	2 3	8 6	22 11
1861,	400	0 11 10	0 11 1	6 5	1 15 0	6 11 0	3 11	1 10 10	9 11 4	12 10	12 12	14 15	15 10	2 4	8 0	22 6
1862,	600	1 0 4	0 14 11	7 8	2 3 10	7 13 2	6 7	2 4 3	11 5 10	23 3	27 2	33 7	34 1	2 0	8 8	22 3
1863,	501	1 9 3	1 7 0	14 2	3 5 0	11 9 6	9 5	3 6 2	21 8 4	22 15	32 7	32 14	33 15	2 2	9 9	22 12

* The bale of Native cloth has varied as follows:—

		Yard.			
Jany., Feb. 1860,	Guzzee	30	by	8	Girrahs.
	Garah	12	by	11	"
March 1860 to Dec. 1861,	Guzzee	19	by	8	"
	Garah	11	by	10¼	"
Jany. to Dec. 1862,	Guzzee	18	by	7½	"
	Garah	10½	by	10½	"
Jany. to Dec. 1863,	Guzzee	17	by	7½	"
	Garah	10½	by	10½	"

Agra —Mr H C Barstow, the Assistant Collector, furnishes the following carefully prepared statistics —

Name of Pergunnah	Name of Town	Number of Weavers at Work				Remarks
		1860	1861	1862	1863	
	JOLAHAS					
Huzoor Tehseel	Agra	610	504	420	316	The word 'weavers' has been substituted for the word 'looms' as the number of persons now employed in weaving have been taken and not the actual number of looms in work
	KOLLEES					
		831	707	675	670	
	WEAVERS					
Futtehpore Seekree	,	810	647	5[illegible]6	477	The only statistics obtained in the Huzoor Tehseel are from Agra city and not from the surrounding villages
Khyragurh		680	640	600	532	
Ferozabad		1 000	800	700	500	
Furrah		483	484	483	468	
Futtehabad		915	91[illegible]	875	5[illegible]3	
Iradutnugger		1 064	1 025	972	9[illegible]1	
Bah Pinahut	Pinahut,	70	50	40	31	In this pergunnah only the number of Jolahas in the three towns noted were taken by the Tehseeldars
	Bah	90	70	50	35	
	Kuchera,	5	5	5	4	
Etmadpore,		416	390	474	537	The increase in the number of weavers in pergunnah Etmadpore forms an exception to the general rule This is the *more* surprising as both Agra Railway Station and Toondla junction are situated in the pergunnah affording *great facilities* for *report*
Total		6 974	6 [illegible]3	5 8[illegible]0	5 014	

"From the above Statement it appears that the total diminution amounts to two-sevenths of the whole weaving trade. The decrease is most perceptible in the larger towns, such as Agra, Ferozabad and Pinahut, where weavers have previously been numerous, and where labor may have been more easily diverted to other employments. Although the statistics are not very accurate, yet the decided decrease in Native manufacture shows that the absence of demand for English goods cannot be accounted for on the hypothesis suggested by the letter from the Chamber of Commerce. The advance in the price of English goods has been quite sufficient to check the demand, though the price has not risen in the same ratio as that of Native goods. It has been ascertained as a fact that people in easy circumstances have bought during the past year as little as they could possibly do with, and the poorer classes nothing at all. There are two other reasons which account for the limited sales of the Manchester goods. Firstly, that the agricultural classes infinitely prefer clothing made out of the Native fabrics, as being warmer and more durable; and secondly, that in these cotton producing districts the well-to-do agriculturists have reserved of their cotton a sufficient quantity to clothe themselves and their families. This cotton is spun into thread in their own houses, and then given out to the village weavers, most of whom are, about this time of year, employed in working it up at so much per piece. This custom has saved many of them from the necessity of taking to field labor or beggary, and in a great measure accounts for the fact that the decrease in numbers of persons employed in this trade is much less perceptible in villages than in the larger towns where no such custom obtains."

The Collector, Mr. Pollock, in transmitting the above report, adds,—

4. "The result of my own personal inquiries leads me to believe, that amongst the agricultural classes, the

poorer have for some time past had to forego purchasing cotton goods, owing to their increased price, whilst those in better circumstances have, as Mr Barstow states, kept back from their total out turn sufficient to meet the wants of their own families, which they have manufactured into cloth through the village weavers

5 "Amongst the non agricultural classes, the effect of the enhanced prices is most palpable, they one and all state that they cannot afford to buy cloth at the present price, and I believe very little business in the cloth line has been done at Agra for the past six months

6 "Experience teaches us that when there is a great demand and a limited supply, the price of articles increases greatly, and on the other hand, that when the market is well stocked and the demand is small, prices fall

7 "In the present instance of cotton cloth, there is not only a great demand, but a very abundant supply also, both in the local marts at Agra and in Calcutta, and yet no business is transacted I know as a fact that there are large quantities of piece goods in the wholesale merchants stores at Agra, but they will not sell until they can make a profit, and there is no denying the want of cloth amongst the people

8 "The solution of this anomaly is this The retail merchants have no money to purchase, all the available money in the market has been taken up for the purchase of the raw material, an investment which pays much better than an investment in the manufactured article The shroffs are receiving at the present date 3 per cent per mensem on the money they lend out, and the profits on cotton goods do not amount to half that sum, notwithstanding the great want of cloth

9 "But I am convinced, from inquiries I have made from the merchants that the absence of demand for cotton goods is but temporary owing to the season

10. "The tightness of the money market has only been felt during the last 23 months; it cannot last with its present force beyond the cotton season, which is now beginning to pass over. Again, this is not the season during which English cloth is ever in great demand, it is not till the middle of April and during May and June, that business in piece-goods begins to be brisk; folks then purchase their clothes against the rainy season; I believe, therefore, that in the course of two or three months the demand for English manufactured goods will be as great as it usually is at that season."

Etah.—In 1860, there were 2,433 looms at work. In 1861, probably in consequence of the famine, they fell to 2,023. Since then they have increased slightly to 2,063. The diminished consumption of cotton goods is ascribed to enhanced prices.

Mynpoory.—Looms in 1860, 3,311; in 1863, 3,131. In some villages there has been a slight increase. In Shekoabad a great decrease and consequent distress. The weavers have emigrated or taken to labor as coolies.

Mr. Fendall Thompson writes—

"From the number of looms still at work, it would seem that there has been but a small decrease in the manufacture of cotton goods, but this is not the case; as the looms, so to speak, are working short time, and most of the weavers are struggling against the hard times to continue their occupation. The consumption of cotton goods has materially diminished. Persons who formerly purchased Rs. 100 worth of cotton goods annually have, within the last year, hardly expended Rs. 50 per contra, however those who were in the habit of purchasing the dearer English clothes have lately been obliged to content themselves with the country manufactures, which has, in some measure, assisted the weavers. From what I can learn, however, it is more than probable, that should the dear-

ness of cotton continue, a great number of the looms now working will be stopped "

Furruckabad—Mr R C Oldfield reports—

" I have confined my enquiries to the city of Furruckabad and town, and Tehseelee of Kunouj, at the latter place I was able to make personal enquiry

" The subjoined Statement gives the statistics of the weaving population from 1860 to 1863 —

Name of Town	Number of Looms at work				
	1860	1861	1862	1863	
Furruckabad,	890	580	550	495	
Kunouj,	262	248	217	218	
Villages in Tehseelee Kunouj,	718	708	655	550	

You will perceive a marked and progressive decrease, but I believe that the out turn of cloth has decreased in larger proportion than the number of looms, since I am informed that Rs 10,000 worth of cloth was printed in Kunouj last year, to Rs 5,000 worth this year Those who have given up the trade have taken to field labor and porterage—finding a larger capital required than they possessed to conduct the business

"Cotton has varied in price in Furruckabad as below —

Price per Maund				
1860.	1861	1862	1863	
Rs A P	Rs A P	Rs A P	Rs A P	
9 6 0	12 12 0	13 14 0	27 9 0	

"There has been a progressive rise in the price of English cotton manufactures from 1860 to 1863 The average rise in that period on different kinds has been quite 50 per cent

"The same may be said of *Native cloth only to a still* greater extent.

"The Native weavers use both English and Native thread, the latter is obtained from the villagers, home made from home grown cotton, and there has been no adulteration save the mixture of old with new cotton; about a sixth of the cotton crop may be said to be retained for home use.

"English cotton manufactures have always had a larger demand than the Native; the latter are only worn by the poorest classes, and recommend themselves from their superior strength and durability. The Native manufacture has not at all displaced the English; enhanced prices have of course affected the demand for both, but I believe, the Native manufacture more than the English; and since the same cause, the price of cotton, affects to a great extent both manufactures, the prices of both will rise together, and there is no reason to anticipate that the Native manufactures will displace the English."

Etawah.—Mr. A. O. Hume reports—

2. "I first subjoin in an abstract form the Tabular Statement called for.

Name of Pergunnah.	Name of Town.	NUMBER OF LOOMS AT WORK.				REMARKS.
		1860	1861.	1862.	1863.	
Etawah, ...	*17 in No.*	*1,271*	*1,037*	*847*	602	Many of these looms have been only partially in work. When they had orders, the proprietors wove; when they had none, they went and worked on the nearest road.
Bhurtna, ...	161	923	883	837	812	
Bidhoona, ...	No village details.	260	300	270	250	
Phuppoond,	70	513	489	483	335	
Dullelnugger,	81	978	781	603	450	
Total, ...	...	3,945	3,490	3,040	2,449	

3. "I cannot answer for the exact accuracy of these numbers, but I think, from what the Tehseeldars report,

that they have taken considerable pains to ensure their fidelity, and that they may be regarded as approximately correct.

4. "The effects of the scarcity of cotton have differed very materially, and inexplicably to my personal knowledge, in different parts of this district. In Etawah and Dullelnugger, and to a less extent in Phuppoond, the weavers have been thrown out of employ, and have betaken themselves to cultivation, and to labor on public works, while in Bidhoona and Bhartna, they appear to have continued their manufactures much as usual; and Bidhoona has, I know, exported largely during the past year.

5. "Nowhere have the weavers suffered much, as they have largely enhanced the charge for their own labor. They have less to do than formerly, but they are much better paid for what they do. Formerly, for instance, for a good thick 'jora dhotee,' they charged a rupee, which was 6 annas for the cotton, and 10 annas for labor, and now for thin poor cloth, that contains at most not above a rupee worth, and often not more than 14 annas worth of cotton, they charge Rs. 2-8, so that they now receive at least Rs. 1-8, and in some cases more for the same labor which formerly only produced them 10 annas.

6. "No doubt a very large proportion of the [illegible] crop has been exported, but I am disposed to believe that *at least* 10,000 maunds has been retained for [illegible] consumption. Spinning is the favorite [illegible] of the women in many of our agricultural classes; [illegible] dear or cheap, they will always keep as much as [illegible] them, and then have their own [illegible] under their own superintendence by the [illegible] they patronise. Besides the cotton [illegible] we have still had (reduced [illegible] many looms at work during the [illegible] especially, the weavers [illegible]

and their produce to have found ready sale at the Dobey, Khyrabad, Mukhunpoor and other great fairs in the environs.

7. "The poorer classes, who are *not themselves cultivators*, but who follow other trades or labor (whether in the fields or in public works) for hire, have suffered much from the great rise in cotton, and *with* it in *woollen* goods. Those poor people rarely got a new suit more than once in two years, and *many, many* of them are still wearing the rags they purchased four years ago. This has been painfully apparent, during this late cold weather especially. The Zemindars and Cultivators have, as a rule, gained largely by the rise, and have not generally, I should judge, diminished sensibly their consumption. Very generally, these dress in cloth woven from home-spun thread; and this latter, as above noticed, continues to be produced, it seems to me pretty nearly, if not quite as plentifully as before."

Jhansie Division.—The Commissioner Major B. P. Lloyd reports—

2. "The only place in this Division where cloth is manufactured to any extent, is Mhow Raneepore in the Jhansie District, where formerly some 600 looms were at work in the preparation of 'Ekree' cloth, which, when dyed, becomes the red fabric well known as 'Kharooa.' The number of looms, as well as the number of persons engaged in the dyeing trade, have decreased very considerably within the last two years, and the same may be said of the weavers of the city of Jhansie (now in Scindia's dominions,) and other places of less note. During a recent tour in the Mhow pergunnah, the subject was frequently mentioned to me, and I was informed that many families of both classes had betaken themselves to cultivating and to laboring on the roads, owing to the dearth and dearness of the raw material required for their usual occupation.

3. "At the same time it is a fact that the prices of English fabrics have doubled, and that those of country cloths have risen from 50 to 75 per cent.

4. "I believe, therefore, that the decrease in the demand for English cotton goods is not caused by any increase in local manufactures. The enhanced prices have, doubtless, diminished the consumption, but something is due also to the country markets having been, to some extent, overstocked with Manchester goods before the great rise in the prices of cotton occurred.

5. "I have no information as to the amount of cotton consumed in local manufactures, but judging from the large quantity exported from the towns of Koonch and Calpee in Jaloun, and Koolpohar in Humeerpore, I apprehend that the quantity retained is comparatively very small."

Jaloun.—Captain T. A. Corbett writes—

2. "The dealers in Manchester cloths, doubtless, do not find the Upper Provinces of the Bengal Presidency so profitable a market as they did before the results of the American war were felt in this country to their full intensity. The price of raw cotton in this district is three times the amount that it could have been obtained for three years ago; whilst the cost of English cotton fabrics has risen, I am told, in the same period cent. per cent.; therefore the remark by the Secretary to the Chamber of Commerce to the effect, that the manufactured article has not risen to a price proportionate to the cost of the raw material, would appear to be correct.

3. "But it must be observed, that though Manchester goods may not yet have reached the high figure which might have been anticipated from the cost of the raw material, they have risen quite high enough to check the demand, and also the vanity that induced a very large proportion of the lower classes of Natives to purchase and clothe themselves in brilliant colored chintzes. The

higher and the wealthier classes of Natives still, I imagine, buy as much Manchester cloth as they ever did; but the mass of the people, the people whose incomes average from Rs. 60 to 200 per annum, cannot afford to buy English cloths at their present price, and have taken to economical habits.

4. "From frequent personal enquiry in the villages of this district, I have arrived at the conclusion, that the manufacture of common country cloth has very much diminished of late; the weavers still work at their looms, when they have money to buy raw cotton, or a constituency that will supply them with it in part payment for the cloth; but their capital is small, and their customers amongst the rural population are poor, and will wear their present suits thread-bare rather than pay a high price for new apparel. Thin cloths have come much into fashion; they only contain two-thirds of the cotton that used in days of plenty to be worked up into a durable but substantial cloth, but they suit the requirements of needy people at the present time.

5. "Though the weavers of the Jaloun district are very short of work, few instances are to be found at present of their having entirely given up the trade; with hereditary instinct they prefer it to any other; but when they cannot procure cotton or customers, they work in the fields and on the roads, and appear to be an industrious, laborious class, and well contented with their earnings."

Jhansie.—The looms have fallen from 2,431 in 1860, to 1,828 in 1863. This has mainly occurred among the weavers who worked on their own capital.

In reference to these figures, Major J. Davidson writes:—
"It will be seen that the number of looms at work in 1863, was less by one-sixth than those in use in 1860, and even these were not, by any means, in active operation, as manufactures only on a very limited scale were carried on, and the weavers for want of employment

were driven to labor on the district roads and other public works, while many emigrated to Gwalior, Malwa and elsewhere in quest of a living

3. "The reason generally assigned for the comparatively feeble demand for Manchester goods, is the exceedingly high prices they have attained, and the consequent inability of the majority of the people to purchase them It would appear, however, that in this district there never has been any great demand for English cotton goods, for the middling and poorer classes prefer native wove clothes, which although coarser, are cheaper and are considered to be more durable than Manchester goods, and the upper classes supply their wants in the shape of pugrees, dooputtas, &c, from Chundeyree, where cloths of different kinds and of very excellent texture are extensively manufactured from English and Native spun yarn It may too be assumed as very probable, that Manchester goods, to some extent, have found their way from Bombay, as a return in some measure for the large exports of cotton during the last two years

4 "The high price of cotton has doubtless affected the consumption of cloth for wearing and other purposes, which has fallen off to half or nearly three fourths of what it was in previous years The people restrict themselves to buying as little as possible and when compelled to do so purchase the most inferior and cheapest descriptions of cloth

5 'On the whole, I have reason to believe that there has not been any extension, but on the contrary a diminution of local manufactures and with reference to the quantity of cotton consumed for local purposes, it should be borne in mind that a good deal of the raw material is absorbed as padding for wearing apparel little or no woollen stuffs being used by the people for winter clothing'

Regarding Mhow Ranecpore he says —

"In 1860 and 1861, cotton was imported from Oomraotee into Mhow, and what was not required for local use

higher and the wealthier classes of Natives still, I imagine, buy as much Manchester cloth as they ever did; but the mass of the people, the people whose incomes average from Rs. 60 to 200 per *annum*, cannot afford to buy English cloths at their present price, and have taken to economical habits.

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Regarding Mhow Raneepore he says —

"In 1860 and 1861, cotton was imported from Oomraotee into Mhow, and what was not required for local use

was sent on to Mirzapore; but in 1862 and 1863, obeying the law of demand and supply, the produce of this and other pergunnahs swelled by imports from Humeerpore, Budaon, Hatrass, Furruckabad and Cawnpore, found its way to Oomraotee and Bombay, and the flow still continues.

"Of the 2,500 maunds produced in 1863, about one-third was consumed in the pergunnah and two-thirds exported to Bombay.

"The cotton thread used for weaving in Mhow and Raneepore is obtained chiefly from Bhawulpore in the Etawah district, and is made into 'kharooa,' and other coarse stuffs, whch are sent principally to Hatrass and Furruckabad; but local manufactures, affected by the rise in price, and exports to Bombay have considerably decreased. English thread is never used by the Mhow weavers.

"About 3,000 maunds of cotton is produced in this pergunnah, of which one-third is taken up for local purposes, and two-thirds bought up by Mahajuns and sent to Koonch in Jaloun, where it is manufactured into 'kharooa' and other coarse stuffs. Very little cloth is manufactured in the pergunnah, and the weavers, who still ply their shuttles, earn a very precarious livelihood, living from hand to mouth."

Mr. Sturt, the Assistant Commissioner, also writes—

"I have to state that on consulting the Mahajuns and cloth merchants of the station on the subject, it would appear from their statement that Manchester cotton goods are very little in demand in this part of the district; first, because of the people being generally poor, they cannot afford to pay the enhanced prices of such goods. Secondly, owing to their being of a much less durable nature compared with American and other country stuffs.

"Since the American war, the price of Native cotton goods has risen in value to about 75 per cent.; and Manchester about 25 to 30.

"Generally speaking, all European cloths (except woollen) are little used by Natives, and latterly, since the prices have been augmented, they have almost ceased buying them. These remarks, although they refer principally to this district are, I believe, applicable to other districts, hence it cannot be wondered at that the demand for Manchester cotton goods has fallen off of late in the country.

"Every village in this district has in it some families of weavers, who earn their livelihood principally by cultivating land, and carry on their trade as weavers, only sufficiently to supply their village community with cloths. In large villages, however, where this class is numerous, a larger supply of country stuff is manufactured to supply the demand for dyeing purposes for the Factories at Juggumunpore, Sydnugger, Kotra and Motee Kutra, and Erich, &c., where 'kharooa' and other colored cloths are prepared from 'Alldye.' It is not to be supposed for a moment that villagers sell off the whole produce of cotton for exportation, the pickers and other laborers employed in cotton fields are paid in kind, and they find it much more profitable to spin and turn their earnings into cash by selling thread instead of raw produce."

Lullutpore.—This district is very poor, and the demand for English cloth has always been very limited. Very little cotton is grown, and it is procured with difficulty; consequently weaving has greatly diminished.

Major Tyler reports—

6. "From this great dearth of cotton and its enhanced price, the weavers have been unable to find occupation for their looms; they have been unable to get advances from their shroffs to enable them to seek for cotton for purchase, and so many looms have been sold almost for firewood to meet the exorbitant demands of the shroffs These families have given up their former calling and taken to coolie labor. In this manner, I am given to understand three-

fourths of the looms that used formerly to be worked have disappeared.

7. "During the time that cotton was even somewhat plentiful, and had not risen to its present price, I find that the weaver never expected to earn or demanded more than 5 annas for labor on a 'thân' of 'dhotee' cloth, which took them and their families on an average from 4 to 5 days to turn out. The price of a dhotee used to average from Re. 1 to Rs. 1-8 of a good strong and thickly-woven cloth, now at prices ruling from Rs. 3 to Rs. 3-8, only a most inferior description of dhotee can be purchased, I ought rather to state can be sold and not purchased; for, there are still sellers, but no purchasers, or comparatively only a very small number. The weavers though battling the best they could to gain a livelihood at their trades have broken down. The anticipation now prevalent amongst this class is that even the few looms now at work must also be given up in a short time.

8. "Previous to these hard times, it was a source of great difficulty to get laborers for works of any description, but since the last eight months or so, this class (whole families) flock to get work, and in many instances, I am afraid, that many have left the district. But of a population of coolies, numbering about 150 to 200 on the Doodhaie Bund in the Balabehut jungles, more than two-thirds are of the weaver class, who have had to give up their looms and take to the pick-axe and shovel.

9. "Previous to concluding, I must observe that in the manufacture of Native clothes, nothing but country-made thread is ever used, English cotton thread not having as yet reached this inland district."

ALLAHABAD DIVISION.

Cawnpore.—The Statement submitted by the Collector shows a diminution since 1860 of from 9,700 looms to 8,850. But the details vary greatly. In Cawnpore itself they have fallen from 1,440 to 610; and so in other considerable

towns, where the weavers used to work upon their own capital In the Bhogneepore pergunnah, on the contrary, the looms are said to have increased from 2,880 in 1862 to 3,990 in 1863 These numbers are probably exaggerated, but in so far as Mr Muir could learn by local enquiry on his late tour, the weavers belonging to the agricultural population in this pergunnah, are kept well supplied by the job work they receive from the Cultivators and Zemindars, who employ them to make up their own home-spun cotton

Mr H Monckton estimates that about three fourths of the cotton crop has been delivered for exportation He further writes —

"The regular weavers or Jolahas have, generally, merely diminished the amount of work, but kept up their looms Those of the Kolee caste have taken to other occupations, such as field and other out door labor

2 "The price of manufactured goods of the coarser kind has about doubled, and the consumption has fallen off to one half Cloth of the finer qualities used to be made from English manufactured thread, at present this manufacture has nearly ceased "

Humeerpore —The number of looms has fallen from 4,527 to 3,448, and even these are said to be short of work The decrease is principally in the town of Raat and elsewhere The looms in the outlying villages have been little affected, they having been kept employed by the cotton grown in the district

Many of the lower classes are said to have taken to the use of "coarse blankets, and similar articles of woollen stuff

Futtehpore —The looms have decreased from 2,768 in 1860, to 2,166 in 1863 Similar remarks apply here as in Humeerpore The looms in the outlying villages are probably kept fairly supplied from the neighbouring cotton fields Mr Power says "At present the weaving class, especially

old women and widows, who spin the twist are the only sufferers." The Board presume that this refers to the larger towns where the trade has suffered most: thus in Futtehpore itself the looms have fallen from 190 to 60.

Banda.—The statistics are confined to four chief cities, in which the decrease of looms has been from 191 to 173. But considerable distress is alleged to have affected the class throughout the district, and many have taken service as labourers in the Railway works.

Allahabad.—Going eastward, we first begin to find in this district the full effect of the dearth of cotton upon the weaving population. The decrease in the looms since 1860, is estimated at above 6,000. In that year they were 10,000; in 1863, 4,000. In a few of the pergunnahs, where cotton is grown, the diminution is comparatively small. In Allahabad the looms at work have from 807 dwindled down to 191. In the trading pergunnah of Secundra they are reduced to 281 from 2,543. The unemployed operatives may be seen seeking for service as bheesties or coolies. In the outlying villages they have taken to agricultural labor.

On the diminished use of European fabrics, Mr. G. H. M. Ricketts, C. B., writes as follows:—

4. "It is certain that the actual number of persons now using cloth of country manufacture, is far larger than formerly. They are driven to do so by the high price of imported goods. Formerly imported cloth was worn by many—even of the actual laboring classes. Now shopkeepers even are clothed in stuff manufactured in their own neighbourhood.

5. "I have here stated that sufficient raw cotton is retained to clothe the greater portion of the community; that the number of those weaving country stuff is increasing; and still in my accompanying Statement, I show how great has been the falling off in the weaving trade, and how great the destitution of the weavers. There is

only one way to reconcile these apparently conflicting statements. It is evident then that the whole population must be far nearer a state of pristine nudity than before even. This is actually the case. Every poor person stints himself to an inconceivable degree in his clothing, and every purpose to which cotton is applied; he wears his puggree and breech cloth to rags; dispenses with his body clothing, and denies himself his annual renewal of his scanty suit."

BENARES DIVISION.

Goruckpore.—The number of *weavers* is given as 3,824 in 1860; and 2,920 in 1863. But of those latter "a large number have taken to agriculture, although living in their villages:" the balance or nearly a thousand persons have emigrated in search of employment. As no cotton is produced in this district, the extreme depression of the weaver class may easily be understood.

The Collector, Mr. Gore Ousely, adds,—

"During my tour in the south-eastern part of this district, I have seen several weavers working in the fields; they told me that they had discontinued working at their looms for the last two years; they appear to be wretchedly clad, and one man, a weaver, left his plough and ran across the fields to beg alms from me.

"I found in several places that the price of cloth (Native) had increased three-fold. Many people told me that they were obliged to keep on wearing their old patched clothes, and that they burnt more wood at night than formerly to keep themselves warm.

"Whilst on the subject of what the poor and ignorant say, I may add, that on one occasion I heard a report that the English Government had prevented the sale of cotton, as they wished to make the people take to wearing leather garments in order to deprive them of their caste.

"In conclusion, I beg to add, that this district produces very little cotton. What cotton is manufactured into cloth is imported into the district from Azimgurh and Ghazeepore. Some of the cotton, so brought, used to find its way up to Nepaul; but during the last two years the quantity of cotton brought into the district has considerably decreased."

The Officiating Commissioner of Goruckpore writes—

"There is no doubt that a number of cloth weavers have been thrown out of work, and have suffered considerably by the scarcity and high price of cotton thread. These men, I am told, have taken to agriculture and general work as day laborers.

2. "The demand for cotton cloths has diminished, owing to the high prices, considerably. The coarse cloth called 'guzzee' or 'garah' formerly sold at Rs. 1-4 the piece of 15 English yards, it now sells for Rs. 2-8. Cotton now sells at Re. 1 the seer of 2℔s. English; it was formerly sold at 2¾ seers, equal to 5℔s. English, the rupee.

3. "The import of cotton has much diminished. It used to be imported in large quantities from Banda. The import of English piece-goods has much decreased. The prices are much higher, particularly long cloth, which used to sell at Rs. 7 the piece of 40 yards English; and now sells for Rs. 12. The price of cotton goods has increased, but not in the same ratio. Generally they sell for half as much again as they formerly sold for.

4. "Woollen goods, whether of foreign or Native manufacture, sell at the same price as formerly, and the import is much about the same."

Mr. Shakespear, Commissioner of the Benares Division, reports as follows:—

2. "Cotton is only produced in the Benares Division for local consumption, and the enhanced price of the article has of course affected all classes, especially the poorer,

who have, as a rule, abandoned the use of cotton-wadded clothing, employing woollen articles instead.

3. "During my present tour, I have made enquiries on the subject, and in one particular locality, Mhow, in the Azimgurh district, well-known for the excellence of its cotton manufacture, I found that many of the 'Jolahas' had left the place, report said for the Bombay Presidency and for Mecca.

4. "On asking for the finest cloth they could turn out, I was told that the manufacture of it had fallen off very much, but that they would make the finest quality cheaper than the coarser, as the latter required more cotton thread. This indicates great depression, the falling off in customers resulting of course from the high price of cotton, and bringing the workmen to such straits that their labor was a secondary consideration as compared with the cost of the cotton thread."

Jounpore.—The looms have diminished from 3,012 to 1,986. The Collector states that the dearness of cotton (of which little is here produced) has diverted labor from weaving, the operatives having betaken themselves to the work of coolies, or servants, or to begging. The enhanced prices have affected first the Native, and then the European fabrics. "The European manufacture is always preferred to the Native, but enhanced price has caused a more economical consumption."

Azimgurh.—There has been a falling off of nearly 4,000 looms; 12,500 are stated to have been at work in 1860, now only 8,680. The falling off in work has no doubt been in a still larger ratio, but the Collector has not submitted any observations on the subject.

Mirzapore.—Mr. McChlery, the Collector, writes—

2. "It is well known that the higher classes of Natives, both Hindoo and Mussulmans in these Provinces, look down upon the profession of a weaver of cloth as a low and degrading one; therefore, as a trade, it is confined to

two castes of people, only known as the 'Jolaha' and 'Koree'; the former an inferior class of Mahomedan, among whom the largest number of cloth-weavers is to be found, and generally the manufacturers of the superior description of cotton stuffs used for Native dress; and the latter a low caste Hindoo, ranking with Chumars, who confine themselves to weaving the coarser kinds of cloth, such as dhotees, &c. So long as these people possess sufficient capital to carry on their trade, they generally make it their chief occupation and means of support; otherwise, when compelled by necessity to resort to other means, their caste and position do not prevent their taking to agriculture, or serving as ploughmen, chowkeedars, grooms, or in any other menial capacity.

"Mhow and Moobarukpore, in the Azimgurh District, are the largest manufacturing towns known to me in these Provinces, and the population consist almost entirely of (Jolahas) weavers. These towns, previous to the late rise in cotton, were in a state of decay, unable to compete with the home manufactures; and I imagine, the population must have now taken to agricultural pursuits, or emigrated in large numbers, as they did in former years to the Mauritius and the West Indies.

"That many have emigrated to distant parts in search of employment, and that generally speaking, the scarcity of cotton, consequent on the unusually large exportations to England, &c., from this country, is a domestic pressure upon the ordinary classes of the entire population, is quite obvious.

4. "The Tabular Statement represents the statistics of the weaving population for the last four years, from 1860 to 1863 inclusive. How far it can be relied on I am not prepared to say, but at all events, it will be seen, there has been a gradual diminution in the number of looms in use yearly since 1860 until in 1863, the number compared with 1860 has been reduced by 25 per cent.

5 "This is not a cotton growing district, but from its extensive traffic in that commodity with the cotton manufacturing districts in the Central Provinces, it has become one of the largest marts in Upper India, and though I have not been able to ascertain the quantity annually received into the town, the amount retained for local consumption is insignificant, and the bulk is consigned to Calcutta for foreign exportation Cotton, which, previous to the American war, could have been bought at the very highest market rate, at from Rs 16 to 20 per maund of 40 seers, is now selling at from Rs. 40 to 45 per maund

6 "It is therefore natural to suppose that this price is far beyond the capacity of people, such as I have described in my 2nd paragraph, to obtain for the purpose of following their occupation as weavers and the consequences are the decrease in manufacture of country piece goods, and enhancement in its value in many articles of Native clothing to double the price for which it could be got before the rise in the price of cotton

7 "The Statement No 2 accompanying this report will show the comparative prices of each article of clothing used in a native family of ordinary class, by which it will be seen that the cost of one suit of clothing for a family in ordinary circumstances at the present enhanced prices of cloth, would, in better times, have supplied them with two, and the probability is they are now obliged to content themselves with half the complement they formerly possessed, hence the decrease in the demand for country woven cloth

8 "Below are notes, as obtained from some of the leading cloth merchants in the town, of the past and present prices of *European* manufactured cotton fabrics, generally used for purposes of dress by the Native population —

	Price 1½ years ago.			Present price.		
	Rs.	As.	P.	Rs.	As.	P.
Long-cloth per piece of 40 yards, ...	8	0	0	14	0	0
Nainsookh (coarse Jaquenet) per piece, ...	2	8	0	5	0	0
Printed muslin gown dress pieces, ...	5	8	0	7	8	0

"To this enhancement on the price of European manufactured cotton goods, placing it beyond the means of the majority of the Native population to use, may be attributed the diminished demand for it, and a consequent decrease in the importation of Manchester cotton goods.

The Statement No 2, here referred to, is as follows —

Name of Article		Native Manufacture. 1861	Native Manufacture. 1862	Native Manufacture. 1863	English Manufacture 1861	English Manufacture 1862	English Manufacture 1863.
Dhotee for man of 17 hands.	1st	1 4 0	1 8 0	2 8 0	1 11 0	2 4 0	2 13 0
	2nd	1 0 0	1 4 0	2 0 0	0 0 0	0 0 0	0 0 0
Do for woman of 22 hands	1st	1 8 0	1 12 0	3 8 0	2 4 0	3 0 0	3 12 0
	2nd	1 4 0	1 8 0	3 0 0			
Do. Kinardar	1st.	1 9 0	2 8 0	3 0 0			
	2nd	1 4 0	2 0 0	2 12 0			
Kiloowa.	1st	0 12 0	1 0 0	1 8 0			
	2nd	0 10 0	0 12 0	1 4 0			
Gujeo of 31 hands	1st	1 8 0	2 0 0	3 8 0			
	2nd	1 4 0	1 12 0	3 0 0			
Garah one piece	1st	1 0 0	1 4 0	1 8 0			
	2nd	0 14 0	1 0 0	1 6 0			
Chowree,	...	0 12 0	1 0 0	1 4 0	0 15 0	1 4 0	1 9 0
Dogra or Razaee,		0 14 0	1 4 0	1 9 0	0 0 0	0 0 0	0 0 0
Dhur, ...		1 1 0	1 12 0	2 8 0	2 4 0	3 0 0	3 12 0
Angochha		0 9 0	1 12 0	1 0 0	0 9 0	0 12 0	0 15 0
Mirzaie,		0 3 0	0 5 0	0 6 0	0 3 0	0 5 0	0 6 3
Yarn Thread one seer	1st	1 8 0	2 0 0	2 10 0			
	2nd	1 0 0	1 8 0	2 0 0			
	3rd	1 0 0	1 4 0	1 12 0			

	Native Manufacture 1862	Native Manufacture 1863
Cost of a woman s dress	1 8 0	2 0 0
Ditto of a man s,	2 4 0	4 8 0

	English Manufacture 1862	English Manufacture 1863
Woman s dress	2 4 0	3 9 0
Man s dress,	4 0 0	5 0 0

The Board remark that this Statement possesses a special interest as showing that, notwithstanding the comparatively greater ratio of increase in the price of the Native article, a purchaser can still clothe himself in every article (excepting perhaps the *Agouncha*) more cheaply of Native than of European stuff. For example, a suit of male attire has doubled in price from Rs. 2-4-0 to Rs. 4-8-0, or cent. per cent. The English article has increased by only 25 per cent., but still it costs Rs. 5, or more than the Native suit. Similarly a female suit of Native stuff can be purchased for Rs. 2, while of European stuff it would cost Rs. 3-9-0.

Benares.—Looms in 1860, 2,268; in 1863, 1,649.

Mr. J. H. Bax, C. B., reports—

2. "The number of looms at work in the different towns during the past and previous years has been carefully ascertained by local enquiry, and where possible, by a reference to the lists prepared for carrying out the License Tax Act.

3. "The Board, however, are already aware that very little cotton is grown in the Benares district, and consequently much of what is required for local consumption is procured from elsewhere.

4. "As far as I can learn, the effect of the high price of cotton and cotton articles has been to induce people to observe greater economy with regard to clothing, the poorer classes have recourse as far as possible to cheaper and more durable stuffs, such as blankets, &c., and the middle class, it is said, try to manage with their old clothes; buying new ones only when actually necessary.

5. "It will be observed from the Statement, that in some localities there is no actual decrease in the number of looms at work in the last 4 or 5 years. With regard to these, I beg, however, to remark, that though the number be the same, yet it has been ascertained that the amount of work turned out has greatly diminished."

Ghazeepore.—Mr M Brodhurst writes—

2 "The result of enquiries I have made from the several Tehseeldars of this District, as also personally from the chief cloth merchants, cotton brokers and weavers of Ghazeepore, in no wise supports the impression of the Bengal Chamber of Commerce, *viz*, 'the local manufactures on an extended scale would go far to account for the very feeble demand for Manchester goods that comes from the Upper and North Western Provinces,' and for reasons which will subsequently be given, it is I think clear, that so far as this District is concerned, 'the remarkable absence of the usual demand for Manchester cotton goods is owing not to an increase in the sale of country cotton manufactures, but to the inability of the people generally, consequent on the great rise in price, to purchase cotton fabrics, whether imported or of Native manufacture, and further, that not only has Native weaving not increased within the last few years, but that it has on the contrary very greatly decreased

"The number of looms originally, about 7,000, is estimated to have been reduced to half that number

Mr Brodhurst proceeds —

4 "Many of the Jolahas of this District have of late emigrated to the Mauritius and elsewhere, and many others having abandoned their original occupation, have become bhistees, laborers, hawkers of cloth, and beggars

5 "As is well known, this is not a cotton growing district, the crop is not sown separately, but with others, such as Urhur, Kodo, &c It is calculated that the out turn of the district is about 1,600 maunds, and this is not sold, but used by the cultivators as padding for their ruzais, or in making up their woman's clothes, they themselves buying finer cloth for their personal requirements

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times about 10,000 maunds per annum are detained for the use of the district, and that at present about 5,000 or 6,000 maunds are thus applied.

7. "The Natives of this district generally wear cloth of European manufacture, finding it more durable, pleasanter to wear, and in the end cheaper than cloth woven in this country; whether with imported or Native cotton.

8. "The Ghazeepore Jolahas do not apparently mix anything with the cotton; they state their occupation has of late fallen off to a most alarming extent; that not one-half of the usual number of looms is at work, and that even of the reduced number many are kept up merely in order that the children may not forget how to weave.

9. "For pugrees, cloth woven at or near Hooghly, as also at other places in Bengal, appears to be most appreciated, and for other articles of dress imported fabrics are most in demand, and are worn even by Chumars and others of equally low caste.

10. "Within the last three years, cotton goods, whether imported or Native, have about doubled in price. The poor are said scarcely to possess one-fourth of the cotton clothing they used to own; persons in better circumstances are reported to manage as best they can with the clothes bought in more prosperous times, trusting that the price of cotton, and consequently of cotton goods, will soon fall. The demand for Dhoosa, or coarse country flannel and blankets, has been unusually great during the present cold season, owing to their prices being very far below that paid for ordinary wadded quilts or ruzais.

Notes regarding the amount of Cotton transmitted to Bombay, and cost of Carriage

Hattrass—Mr J H Prinsep, the Collector, reports About 5,700 maunds of cotton were purchased by Bombay brokers at about 30 Rs a maund for sale at Bombay. It was sent from Hattrass viâ Indore, on carts, as far as Julgaon, and thence by Railway to Bombay, at an aggregate cost of 8 Rs per maund for carriage, and about 2 Rs per maund as "road expenses and food of those in charge,' &c The period occupied in the journey is reckoned at three months

The distance to Calcutta and Bombay is estimated to be almost the same (408 coss the former, 405 the latter) but the cost of transmission to Calcutta, including all expenses is only 5 Rs a maund The higher prices offered at Bombay are, however, expected to more than repay the difference The rates in Bombay were said by the merchants to be 10 Rs higher than at Calcutta A good deal of the cotton above mentioned had not been disposed of at Bombay, possibly in consequence of the fall of price

Muthra —The following information is given by Mr Henderson, the Collector —

"During the year 1863, cotton has been sent to Bombay from two Mundees in this District, Kosee and Muttra From Kosee 3,000 maunds on native carts, and camels, at carriage rates of 7 Rs and Rs 6 8-0 per maund From Muttra 4,550 maunds on carts only, at 7 Rs per maund At Indore the cotton is transferred from the large garries sent from here to the small Goojratee carts From here to Indore the carriage is 3 Rs per maund, thence to Mundyar 1 10 0, thence to Rail 12 coss from Bombay, 2 Rs, and by Rail 4 annas total 6 14 0, say 7 Rs To this the merchants add following expenses —

Agra—Mr Pollock reports as follows —

"There are three stages between Agra and Bombay, *viz*, from Agra to Indore, to the nearest point of Railway, and to the capital itself

"The first portion of the journey is performed by carts and camels, the former are preferred, because the loads in them are never shifted till the end of the trip, whereas camels are delivered of their loads at the end of every march, and this loading and unloading is supposed to damage the cotton

"The second trip, 80 coss, is performed on camels only, the load is too heavy for wheeled carriage, the *third* by Railway

"The rates *to Indore* alone I have been able to ascertain The merchants here do not consign their cotton to houses in Indore or Bombay The Bombay merchants send up their own Agents, who purchase and despatch the cotton on Agra camels and carts as far as Indore, and there the carriage is changed, so there is no one in Agra who can give information regarding the rates of carriage from Indore to Bombay

"The rates for both camels and carts fron Agra to Indore are the same, *viz*, from 3 Rs to 3½ Rs per maund

"The journey is performed by carts in 30, and by camels in 24 days to Indore

"The second trip (80 coss) I suppose they do in 10 days, and if they get carriage, the Railway should take their freight in one day

"The greater portion of the cotton transmitted from these parts to Calcutta is carried in boats, and the journey occupies from 30 to 40 days This mode of carriage is preferred to the road for two reasons In the first place it is quicker, and secondly the moisture of the atmosphere on the water increases the weight of the cotton and brings in a large return to the merchant. So although the rate per maund which he pays for river

carriage is (1 Re. 8 annas for boat hire and 2 Rs. 12 annas insurance) 4 Rs. 4 annas against (2 Rs. 8 annas for carriage and 10 annas insurance.) Rs. 3-2 annas for cart hire, yet the increased profit for the extra weight of the article amply covers the loss on the cost of carriage."

Calpee.—Four hundred *guddas*, containing each 2½ local maunds, *i. e.*, 1,000 local weight, (or about 1,200 maunds English weight,) were despatched on account of a Mirzapore firm from Calpee, on above 300 camels belonging to a Cabool merchant, *viâ* Jhansie, Saugor, Bhopal and Indore for Bombay. The rate fixed is 3 Rs. the local maund to Indore, which was to be reached in a month and 7 days. The rates beyond are not known. The despatch was intended to meet engagements at Bombay contracted by the Mirzapore firm. The same firm bought 1,600 *guddas*, or 4,800 Government maunds, but despatched the rest *viâ* Mirzapore.

Last year about 30,000 local maunds were exported from Calpee, as against 44,000, (52,800 Government maunds) this year. The greater part is sent by boat to Mirzapore, and for the trip costs per maund—

	Rs.	As.	P.
Freight, ...	0	6	6
Insurance, ...	0	6	6
Miscellaneous expenses, ...	0	1	0
	0	14	0

to which must be added the heavy premium in the remittance of money from Mirzapore.

Mirzapore.—As stated in the body of the Board's report, only about 1,300 maunds were sent from this mart to Bombay, partly by camels to Indore, partly *viâ* Oomrawuttee. The period and rates are as follows:—

		Rate per maund	Period
To Nagpore,	By Cart,	5 Rs	40 days
	„ Camel,	6 „	30 „
To Oomrawuttee,	By Cart,	6 „	50 „
	„ Camel,	7 „	40 „

The carts take about 8 maunds for each pair of bullocks, and are drawn by from two to five pairs

General remarks —As we proceed from the Jumna inland to the parts of Bundelkhund farther west and south, the attraction of the Bombay market becomes stronger, and large quantities of cotton are said to be exported both by Indore and Oomrawuttee in that direction The Oomrawuttee route is preferred, as it lies entirely through British territory, and the exactions of the Gwalior people are avoided The grand line from Calpee and Jhansie *vià* Lullutpore and the Malthone Pass possesses great advantages in this respect, and it is not understood why it has been set aside for the route from Jhansie *vià* Nowgong, which passes through Independent States

The wholesale rates for cotton at the close of February, at the chief marts in these Provinces, were as follows —

	Rs	As	P	
Meerut,	26	10	8	per maund
Allygurh,	30	0	0	„
Bareilly,	26	6	6	„
Agra,	28	0	0	„
Cawnpore,	37	0	0	„
Mirzapore,	40	0	0	„
Ghazeepore,	42	10	6	„

CRIMINAL STATISTICS.

No. 1.

NOTES ON TRIAL BY JURY.

By Henry Lushington, Esq.

1. Fourteen years have elapsed since Regulation VI of 1832 was promulgated—a period sufficiently extended to give that enactment a fair trial.

2. It was declared at the time (Secretary to Government, Judicial Department, to Register Sudder Dewanny Adawlut, 16th October 1832) to be an experimental measure, and the hope was expressed, that "by means of it information might be elicited to enable the Government to judge of the practicability and expediency of introducing, throughout the country, an efficient system of trial by jury."

3. The Government cannot have lost sight of this very important subject, and they are doubtless in possession of full information; nevertheless, the experience of twenty years, a sincere interest in the welfare of the native community, and the desire to be in some degree instrumental in conferring upon them the blessings of our noble institution, have encouraged me to record the following observations on the expediency and practicability of extending and improving the provisions of Regulation VI of 1832, and of fixing the mode of procedure under that law.

4. The idea of settling any disputed point by the "verdict" or declared opinion of their "equals" or brethren, has ever been familiar to the natives of India. The popularity and extensive use of the punchayet in past times are points upon which no two opinions are now held. "Punj men purmesshur" was a proverb before the kings of Dehli granted to Englishmen the Dewanee of Bengal. It is so still, and, if we were to carry our enquiries no further than into the private history of our domestic attendants, we should learn with surprise how constantly and how seriously their persons and property are affected

by the decision of punchayets, and we might conclude from their silent acquiescence, that the presence of the deity is still acknowledged

5. No Officer of Government can have failed to observe how frequently the name of "punchayet occurs in all judicial proceedings The party, whose interest it is to quote the decision of the arbitrators, may not be able to prove it so circumstantially as might be required to render it evidence in a court of justice, but the instances in which they are alluded to in the pleadings are innumerable, and rarely are they so alluded to without having had existence

6 Still more frequent have been the opportunities of observing the extensive use of punchayets, possessed by the late Settlement Officers From my own experience I can safely say that, except in the uncultivated parts of the country, I scarcely ever investigated any purely village questions which had not at sometime or other been brought before a punchayet The heads of villages and of larger divisions have not now the local influence which they exercised under the native Government and to this may, in some measure, be attributed the disobedience of the losing party to the decision of the arbitrators of the present day Section 3, Regulation VI of 1813, than which no law has been enacted more consonant with the habits, or more suitable to the character, of the people, was well calculated to remedy this evil, though its provisions have become of less moment since the completion of the settlements

7 Yet the weight which attaches to the decisions of punchayets, not only amongst themselves, but even when brought before our Civil and Criminal Courts, is as great as if they had emanated from any regularly constituted tribunal Indeed, I question whether any Judge would interfere with the finding of a punchayet upon a matter of *fact*, (which is *the* point now) if he were satisfied that the

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members, having been appointed with the consent of the parties, had held sittings and come to a determination. I will here mention very shortly only two instances, which have particularly struck me, one of which passed before me officially.

8. *First, Civil.* In the Sudder Dewanny Adawlut of the Presidency, the claim of a woman to property, which *had devolved on her at the death of her parents*, was dismissed because a punchayet had before decided that she had forfeited her claim by her profligate conduct.—*See Select Report Sudder Dewanny Adawlut, volume 2, page 257.*

9. *Second, Criminal.* A woman was unfaithful to her husband; a punchayet excommunicated him; and he, in consequence of the excommunication, not of the infidelity, murdered his wife, and was sentenced to perpetual imprisonment. This is not a happy instance of the value of punchayets, but at present our concern is with their *power.* The punchayet, here alluded to, caused the death of the woman, and indirectly saved the man from a capital sentence.

10. I shall in another place record the result of my personal experience as to the general fitness of the natives of the middle classes for the office of juror, and as to the accuracy of their verdicts. As members of a punchayet their competency has never been questioned amongst themselves, neither need we trouble ourselves to doubt it; and in regard to accuracy, had they been often wrong, the people would have ceased to recognize the divinity of their decisions.

11. This accuracy has, no doubt, been obtained in a *very great degree by the operation of a principle once* admitted in English law, *viz.*, that "private knowledge of facts had as much right to sway the judgment of a jury as the evidence delivered in court." The native arbitrators were generally persons taken from the neighbourhood *(de vicineto)* and might have brought in a verdict, whether

proof was produced by either party or not. Could we secure the services of such persons on juries, we should doubtless derive full advantage from their local information, except in particular cases, where their respect for caste or other prejudices might interfere with the integrity of their judgment; but under the present system no persons would be available for juries except those who resided near the Sudder Station, and these would not possess any of that "private knowledge of facts," which I believe to have contributed largely to the character of infallibility enjoyed by Indian punchayets. Nevertheless, there is much left of which we ought to avail ourselves, and we may relinquish, without regret, any benefit supposed to be derivable from privately informed juries, when we consider that reliance on them is exceedingly dangerous, and that the doctrine has long become obsolete in England.

12. Let it not be supposed from this that I reason under the influence of any supposed analogy between England and India. There cannot be a principle less fitted to guide our judgment on the affairs of this country, but, if there be resemblance in any two of their institutions, it is between the juries of England and the punchayet of India; a resemblance which will be much stronger, if, in making the comparison, we take the former as they were in the days of the Plantagenets. Both will then partake of the character of compurgators; and I desire to interfere no more with the pure native punchayet than is necessary to deprive it of this character. The natives, who find the facts, should be neither compurgators, members of a punchayet, nor assessors, but essentially jurymen.

13. The difference between a jury who possess a private knowledge of facts, and a jury who form their opinion upon the evidence submitted to them, is so great, that some persons have denied that any parallel at all could be drawn between them; and they believe that when punchayets, under the name of juries, cease to have a knowledge of

facts, their decisions will be no better than those of a European Judge. I differ entirely from those who entertain this opinion. The possession of private information may be desirable, especially in India; but, even if they do not possess this advantage, the natives are more able than ourselves to weigh the evidence of their own countrymen, and to estimate the value of circumstantial proof. Their intimate acquaintance with the innumerable and peculiar *customs* of the people, *and of the agricultural* population in particular, enables them to detect a falsehood when a European would have no idea of it, and to suggest questions which would never occur to a stranger. I am writing here not what I think, but what I have *witnessed* repeatedly; and I cannot too strongly deprecate the opinion that respectable natives without private knowledge are not better able to ascertain facts than the European Judges themselves.

14. However highly esteemed and valued by the people of England trial by jury may be, trial by punchayet is more valuable to the people of India. Many Englishmen have held that trial by jury is useful only in times of difficulty and danger, and that it is precious rather as a political, than as a judicial, institution. They have more confidence in the judgment of one man of talent, education, integrity and experience, than they have in the impression produced by evidence upon twelve ordinary men, and, except in times of public excitement, they had rather be tried without a jury than with one. I do not depreciate the merits of the Company's Judges if I say that such extreme confidence can never be justifiably placed in them. They are too widely separated from the natives by language, religion, habits of life, and modes of thinking, to deserve the unbounded trust placed by Englishmen in their own Judges. There would seem to be some natural impediment to the amalgamation of the two races. In what country would men pass the whole

of their lives amongst intelligent natives without associating with them, beyond a formal and occasional visit, and this too, when they are denied all other society? In what other country would they for 20 or 30 years incessantly use the language of the natives, and yet rarely be able to express themselves in it with tolerable accuracy? In what other country would men be engaged from youth to age in fiscal and judicial duties, without at the last understanding the allusions to his habits, prejudices and superstitions, made by every peasant, who stands before them? Doubtless there are many exceptions, many officers whose acquirements are far superior to the average here described, but, generally speaking, the picture is not overdrawn, and it cannot be supposed that such Judges are as competent to decide upon facts as a body of moderately intelligent natives, who are thoroughly conversant with the peculiarities of the various castes and classes which inhabit this country One of the best Judges of the native character, who ever rose to distinction in India, (Sir Thomas Munro,) has left it as his opinion, that, "until the use of the punchayet in criminal cases was adopted, facts would never be so well found as they might be"

15 If the members of the jury were so dishonest as some people suppose, prisoners would frequently object to the individuals who composed it, they would "challenge," and it is to be remembered that in many cases the prosecutors in India would be just as likely to bribe, or influence, as the prisoners, yet in no one instance have I ever heard objections urged to the individuals who composed a jury, though I have invariably invited them Available jurymen are often much sought for, and if the occupation were profitable in any way, the people would not be so reluctant to attend *

* *Note* — Cases have occurred no doubt, in which jurors have not been influenced But where they think the prisoner guilty they often shrink from the odium of an honest verdict, if he be a man of any mark

16. They are hard to convince, I think, but I have a better opinion of their ability and integrity than that which is entertained by many.

17. The high opinion of the decisions of Europeans, entertained by the natives, allowing it to be sincere, as we all readily admit it to be, arises from their *confidence in* our disinterestedness and our integrity, not from any idea of our superior penetration and acumen; and we see every day how contentedly they submit to injustice, if they are satisfied that pains have been taken to ascertain the truth. *This may satisfy them, it ought not to satisfy us*; and, if by the introduction of trial by jury under certain modifications, we can interweave the local knowledge of the punchayet with the laborious integrity of the European Judge, and thus attain to a nearer approximation to the truth, we shall have taken one great step towards the improvement of the condition of the natives, and shall be entitled to the gratitude of the most enduring people upon earth.

18. We have, moreover, introduced some change into the spirit and principles with which natives formerly prosecuted enquiries; and the innovation has not unfrequently been productive of wrong. Our respect for an oath has led us to attach the utmost importance to direct evidence; and, until we are startled from our credulity by equally direct evidence on the other side, we refuse to allow ourselves to be, (as we should say,) *unduly* influenced by circumstances and impressions. The natives of India do not abhor perjury as we do, and it may be questioned whe-

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and position. Beyond the walls of the Court-house no recompense for this odium awaits them, as in England, in the shape of public applause; neither does a dishonest finding subject them to even the feeblest visitation of public censure. It must very often have happened too, that they have not been bribed, only because the result of the trial does not rest with them.

(Signed) H. W. D."

Such is the opinion of one by no means incompetent to judge. All he says is true to a certain extent, and I insert the note because I am seeking for truth, not advocating any particular measure.

ther the enactments regarding the administering of oaths have not aggravated the evil Direct evidence thus becomes of less value, and we can supply the deficiency only by availing ourselves of the services of those who are able to draw their conclusions from other sources

19 Besides the advantages to all concerned in court, some collateral benefit may be anticipated from the consideration which jurors will receive from their own countrymen Some moral effect may be hoped for from the nature of the duties upon which they will be engaged the trust reposed in them will have a tendency to raise their national character, and to create in their minds an interest in the general welfare of the people, the Judges would learn from them, and they would learn from the Judges, and both parties would profit by the association

20 I feel, whilst I write this, the reception which it would receive from many persons neither deficient in judgment nor careless of the well being of the natives They would abruptly reject the idea of all these consequences flowing from the mere attendance of a half willing bunneeah, or an illiterate zemindar, and would condemn as premature, if not visionary, any efforts to raise their character by giving them so minute a share in the internal administration of the country It is, indeed, to be feared that the natives will not at first appreciate the boon which it is proposed to offer them, that the prisoner will not, on all occasions, be very solicitous whether he is tried by a Judge or by Jury, and that the jurors themselves will at first attend unwillingly We ought not, for such reasons, to resign in despair the task of improving their moral condition The resources of the native mind, like the resources of the country, require to be developed there are hidden treasures in both, and the apathy and selfishness, which seem to be wrapped round the hearts of the Hindoos tanies, are not more unpromising in their nature than the dry grass and barren rocks which conceal the locality

of a gold mine. All experiments which have hitherto been made by employing the natives in offices of trust and importance have been successful. These persons, it is true, have been the most highly educated, and most intelligent; but we begin at the wrong end if we strive to raise those only who have already succeeded in raising themselves. Let us now try the classes a few degrees below them, and let us hope that we shall not only find them as competent to the duties assigned them as our Principal Sudder Ameens and Deputy Collectors have proved themselves in their spheres; but that they will ultimately set a due value upon the trust which has been reposed in them, and become aware that they have taken the first step towards governing themselves. The improvement of a people is not the work of a day the nature of the bunneeah or zemindar will not be altered by the passing of a law. It is enough that the operation of that law should be acknowledged to have a beneficial *tendency*: and we need not fear that any peculiarity in the physical or mental constitution of the native of India should permanently blind him to the merits of an institution which, after the experience of centuries, Europe has pronounced to be good.

21. Are we then to introduce the system entire, or must we still be contented with an approximation? My opinion is that we should confine the trial by jury to criminal cases. Compulsory attendance will at first be felt as a hardship, and will create feelings hostile to the growth of those sentiments which we are anxious to foster. If we require that all Civil suits shall be tried with the assistance of a jury, the number of persons summoned will be very great, and the inconvenience will be proportionate. Every Moonsiff must have a jury; and, unless his Court be itinerant, it would be scarcely practicable to supply him without subjecting the people to intolerable inconvenience. I speak comparatively when I say that Moonsiffs do not

urgently require the assistance of juries except in particular cases, whilst European Judges are now Judges of appeal almost exclusively, and juries are rarely required in the disposal of this class of cases

22 I merely touch upon this subject, although it deserves serious consideration if it be determined to introduce trial by jury into Civil as well as Criminal Courts For the present, however, the difficulty of procuring jurymen for all the Moonsiffs' cutcherries, the magnitude of the advance made by introducing the system even into our Criminal Courts, and the caution which is necessary in applying European principles to the Government of India, have satisfied me that it will be wiser first to introduce the system *there*, where it is most wanted,* and most likely to be valued I shall not be sorry to find that in the opinion of those with whom the decision rests, the introduction of the entire system is safe and practicable, but my own impression is, that it should be confined as yet to the Criminal Courts Regulation VI of 1832 might remain as it stands now, and all Civil suits, the decision of which called for the assistance of natives, might still be disposed of according to the provisions of that enactment

23 Before we proceed to the detailed arrangements which will be necessary in carrying out the plan, (and those will be numerous and troublesome,) it is proper to consider how far the working of the experimental law warrants the extension of the principle upon which it was framed

24 Upon this point my information is of course totally deficient, for, in the isolated position occupied by most functionaries in this country, they have little opportunity of profiting by the experience of each other The Sudder Court will gather this information from the several districts, and the result of the experience of many will decide those questions upon which the opinion of one can be of little value.

25. Yet I have not been engaged in judicial duties for six years without having gained some personal acquaintance with the subject; and to no one point in the Civil or Criminal administration of the country has my attention been turned with greater interest and constancy than to the working of Regulation VI of 1832.

26. The first question, naturally, is, whether juries have hitherto found the facts as correctly as the European Judges, aided by the law officers, could have done. No one can directly answer this question. The Officers who report upon the subject will give their own opinions; and the merits of those opinions must rest entirely upon the *general* character for ability, judgment and *liberality of sentiment,* of those who maintain them. *Even then,* conclusions must be drawn with infinite caution; for it is in human nature to prefer our own view of a case, and, where a difference of opinion has occurred between a judge and the jury, it is not improbable that the former will attribute it to the incapacity of the latter, rather than to any error of his own. It is waste of time to speculate upon that which cannot be usefully discussed without examining the returns from the several zillahs, and perusing the reports which, it is assumed, will be required from the Judges whenever the question shall come under consideration.

27. My own opinion is in favor of their decisions. I have never tried a criminal case without a jury at Gorruckpore, Allygurh, Saharunpore, Futtehpore, and Mooradabad. Juries have invariably attended; and the instances in which I have set aside the verdict have been exceedingly rare. In some cases I do not deny that difference of opinion has existed; but, unless the grounds of my own opinion were sufficiently strong to warrant the setting aside of theirs, it may be allowed to be at least *doubtful* which of the two was right. I have never observed any arbitrary character in their verdicts; and in the conversations which I have not thought it irregular to hold with

them after the case was finally disposed of, I have invariably found that they had paid attention to the proceedings, and were able to give a plausible, if not a satisfactory, reason for any opinion which they may have entertained, and which perhaps to me had appeared unaccountable.

28. To assume that juries are wrong because they differ with the Judge, would be to assume that they are useless, except as a political institution.

29. Certainly, I have fancied on several occasions that the jurors were anxious to discover what my own opinion was. I may be doing them injustice; but it is not surprising that men, unaccustomed to the performance of judicial functions, should look anxiously for the support of those whom they have been accustomed to regard as their superiors, and, not having yet grasped the idea of independence, should meet their countrymen out of court with more pride and satisfaction when their verdict had been upheld, than they would have done had it been tacitly condemned. I see nothing very alarming in this; and moreover it would cease the moment their decisions were invested with legal force. It is much more astonishing that we should have been able to get respectable persons to attend to the proceedings, and to give in any verdict at all, when they know that their labor may be rendered superfluous, and almost ridiculous, by the silent neglect of the opinion delivered into Court by them. It is sufficient to dishearten the most zealous to find that their aid had been solicited as a favor, and then rejected as good for nothing; and I confidently expect that whenever the verdict is not liable to be set aside summarily, the natives will give their attendance with much greater alacrity, and that they will apply themselves to the discovery of the *truth* with energy, cheerfulness, and perseverance.

30. It has been said that integrity is not to be expected from that class of natives from which the jurors must

be drawn, exposed as they will be to every species of persuasion, and tempted to forget their honesty in the discharge of *irresponsible duties*. Upon this much discussed question I shall here simply state the result of my own observations, leaving it to others to determine how far their general moral character entitles them to the boon which it is proposed to confer upon them.

31. The cases within my own knowledge, in which any opportunity has been afforded for tampering with a jury, must have been very few indeed; and those cases were well known to the European functionaries, who were therefore on their guard to prevent collusion. Few prisoners have the means of bribing; and in cases where religion or relationship might be supposed to have an influence, arbitrary authority supplied the check which must hereafter be afforded by the exercise of constitutional privileges. As far as my own experience goes, I see no reason to expect more than occasional evil from want of integrity, and that only at first. It has been urged that the natives of this country are unfit for witnesses, and that those who are unfit for witnesses, are unfit for jurors. I doubt whether this deserves grave refutation; one consideration alone seems to me to destroy all analogy; namely, that *all* classes of the natives are not unfit for witnesses, and the average of jurymen will be drawn from a class superior to that, from which the average of witnesses are now drawn. Besides this, the witnesses in all civil, and in most criminal cases are partizans; and, if proper precautions are taken, it will be impossible to influence the jury, because no one will know what particular individuals will be impannelled. I find no fault, generally speaking, with the evidence of any traveller, or the like, to an affray, though the evidence in such cases is proverbially unworthy of credit; and I think, upon the whole, that we might calculate upon the same degree of integrity in jurymen as we now find in a *disinterested* witness of the same class.

And lastly, experience, the safest guide of all, has convinced me of the fact, that witnesses are not to be trusted, and that jurymen *are*. Hardly a single case has come before me in which the veracity of some of the witnesses has not been impugned; yet I have never heard any serious charge against the integrity of a jury. Whether this arises from the causes hinted at in a note to a former passage, or from causes more honorable to the natives, is not of so much importance as it may at first appear to be. If by *any* means we can keep out dishonesty, we shall have gained our end, and secured the services of natives in "finding facts." The natives of the East, as well as those of the West, can "affect a virtue when they have it not;" and one of the best ways of inducing men to act virtuously is to give them credit for virtues which they never possessed. If I were not afraid of wandering too far from my subject, I should here expatiate upon the "assumed virtue" of the natives. It will startle a Euro-pean moralist to hear it asserted that many of our [illegible] and most upright functionaries enjoy the credit of [illegible] "assumed integrity." The idea, however, and the [illegible] tice, are both perfectly familiar to the natives. [illegible] adopt honesty very much in opposition to their [illegible] inclinations; but, if they persevere in [illegible] rules of the order to which they have attached [illegible] the result is integrity, and our end is gained.

32. The Magistrates, I fear, will not be [illegible] favor of juries, and, if they were consulted [illegible] be surprized to find some distinguished [illegible] those who are hostile to the [illegible] ted by themselves they have [illegible] [illegible] of a verdict for [illegible] [illegible] have failed in a [illegible] [illegible] well founded, [illegible] [illegible]pression prevents [illegible] other hand, the [illegible]

often entirely different from the case which appeared before the Magistrate, and, unless the latter went through all the proceedings held on the trial, he could scarcely be competent to judge of the propriety of the verdict. Magistrates must also be supposed to have some little bias in cases committed to the Sessions, which they themselves have already examined, and upon which they have already formally declared their opinion.

33. Jurors attend reluctantly; but their objections are not insuperable. I have become acquainted with several very intelligent and well-informed natives who had never been in the habit of visiting Europeans, and who came to see me at my invitation to explain privately the grounds upon which they prayed to be excused. The number of those who insisted upon the privilege of exemption was small, so small as never materially to interfere with my proceedings: but, if the utmost caution had not been used in granting the indulgence as it was termed, and every effort made to attach disgrace to inability to sit as a juror, I should more than once have been reduced to difficulty. When once assembled, they are for the most part attentive and cheerful: and I have been forcibly struck by the rapid change of demeanour which often occurs in the jurors as soon as the case is opened. The air of ignorance, helplessness, and immobility is laid aside, and in its place appear an acuteness and an interest in the case, which surpassed all my expectations. The magic change, however, is not to be effected without an effort: they must be courteously treated, encouraged, perhaps even *humoured,* ere the wand of Comus shall cease to wave over them.

34. It is, I think, in some official paper at Saharunpore that I found the assertion, that no difficulty had been experienced in procuring juries. When I went there, I found considerable difficulty, and it would be worth while to enquire by *what means* this disinclination had been

overcome in the different zillahs It is always easy to compel the attendance of vakeels and mookhtears, and there are always a few persons hanging about the cutcherries, who may be pressed into the service, but such attendance as this affords no criterion of the facility of procuring voluntary assistance, nor could we with safety draw any conclusions from the proceedings of such ill constituted bodies

35 The Hindoos appear, generally speaking, to take a smaller share in the investigation than the Mahomedans These latter ordinarily take the lead put questions to the witnesses, and probably dictate, if permitted when they retire to consult upon the verdict This might be expected from the characters of the two people, and from the relative political position in which they have for centuries been placed

36 Nothing of this difference is, however, discernible amongst the more highly educated classes, and it is fairly presumable that it will cease to be apparent amongst those to whom my remarks apply, so soon as they shall find themselves publicly treated with the same deference, and equally consulted in the administration of justice.

37 The number of jurors which I have usually employed is five I should have preferred a larger number, but contented myself with these for obvious reasons One of the five was required to be familiar with the Persian character, capable of expressing clearly in writing the opinion of the jury, and of referring to the record, should it be deemed necessary to do so This foreman has been generally one of the vakeels of the Court, all of whom acted in that capacity in rotation, and who, whether able or unable to conduct Civil suits, have almost without exception proved themselves perfectly competent to the discharge of this particular duty This practice of invariably employing an *ex officio* foreman is of course only tolerated, and must be discontinued whenever the parties can

be safely dispensed with; but my object here is rather to shew how I brought the law into operation, than to suggest new provisions; that will come under our consideration in another place.

38. The remaining four jurors were drawn from respectable residents, zemindars, mahajuns and shopkeepers: *not* from the mookhtears of the cutcherries. The same individual never appeared often enough for me to recognize him. Few, therefore, could be familiar with the duty about to be assigned to them; yet they never seemed irrecoverably confused, or behaved in an unbecoming manner. Occasionally, on seeing a juryman take his seat, whose appearance bespoke him more than usually ignorant of the ways of the court, I have enquired of him whether he understood the nature of the duty he was called upon to perform, and the answer has always been given me in the word "punchayet." The inhabitants of cities would perhaps use the word "assessors," but the village zemindars, the peasants, speak of the "punchayet."

39. The jury thus constituted were directed to find a general verdict, if possible, if not, a special verdict was never refused, provided it was distinct and precise; and perhaps, considering the irregular manner in which offences are sometimes named in the calendar, as also the errors of translation which sometimes occur in recording the description of offence in the native languages, it would be as well to encourage special verdicts. The natives understand them better, and it then remains with the Judge to determine whether the particular acts, of which the prisoner has been found guilty, constitute the crime of which he has been accused.

40. No invariable rule was observed in regard to the duration of the attendance of each jury. I was guided by circumstances; but, after receiving their verdict upon one trial, I rarely experienced any difficulty in persuading them to remain for the others. They overcame their dis-

satisfaction at being taken away from their business or amusements, they were possibly gratified by the courtesy with which they were scrupulously treated, they discovered that no more was required of them than they felt themselves competent to perform, and they generally agreed to my proposal that they should sit upon another trial, with an alacrity altogether inconsistent with their previous reluctance

41 They are apt to regard themselves rather in the light of assistant Judges than jurymen, which tends to raise their ideas of the duty which they have to perform, and this, their view of the subject, has been encouraged both by their reminiscences of the punchayet, and by the different methods in which Regulation VI of 1832 has been brought into operation, some Judges availing themselves of the assistance of assessors and others employing juries I have adhered to the use of the latter in all criminal trials, being of opinion that the law officer of the court would answer almost every purpose, if we desired the aid of native experience only in *conducting* an investigation No harm has been done by their entertaining a high idea of the duties of jurymen, for, if their vanity is gratified, they will the more readily consent to some trifling inconvenience Proposing to confine the trial by jury to criminal cases for the present, I should recommend the disuse of assessors, the difference will not be great, and amongst the jurymen we shall frequently find one or more, capable of affording all the assistance which could have been derived from regularly appointed assessors

42 Trial by a jury in India is upon the whole favorable to the prisoner That it should be so under the present system is not to be wondered at for, though a Judge would willingly exercise the discretion reposed in him by Clause 5, Section 3, Regulation VI of 1832, when his own opinion is in favor of the innocence of the prisoner, he would not so readily set aside the acquittal of a jury, and

pass sentence upon one whom they had declared not guilty. This must in the long run operate in favor of prisoners. I am inclined, moreover, to think that, even if the decision of juries shall become final, the prisoner will still have a better chance of escape than if he were tried without one.

43. It will take more proof to carry conviction to a jury, than to a Magistrate or a Judge: such at least is the inference which I am disposed to draw from experience. They would refuse to believe that certain characters could commit certain acts; they would attach *greater* weight to that which might be expected to occur, and *less* to that which had been sworn to have occurred: they would not unfrequently act rather as compurgators than as jurors, and would bring in a verdict of "not guilty" against the evidence, because they could take their oaths that the prisoner was incapable of the act of which he was accused. But these, again, are the very occasions on which we hope to derive advantage from their superior practical information; and it does not follow that the guilty has escaped with impunity because the jury acquits a man whom the Judge would have condemned.

44. Their disregard of confession has, however, attracted my attention, and suggested serious reflections. We are apt to regard deliberate confession before the Magistrate as positive proof, and we are satisfied with enquiring whether the party confessing was in possession of his senses at the time, and whether persuasion or menace was employed in procuring his admissions. The natives of India think differently, and receive with extreme caution every declaration injurious to the party making it. Now, as a great portion of the prisoners sentenced in this country are convicted upon their own confessions, there is some ground for apprehension that, when verdicts become final, the guilty will escape oftener than they do now.

45. It is true that their distrust of confession has appeared to me extreme; but we must not make the mistake

of assuming that they are wrong. This is not the place for discussing the point; but in defence of the opinions of those whose condition I desire to improve, I trust I shall be excused for quoting a single sentence from the Commentaries on the Laws of England.

46. "They" (confessions) "are the weakest and most suspicious of all testimony, ever liable to be obtained by artifice, false hopes, promise of favor and menaces, seldom remembered accurately, or reported with due precision, and incapable in their nature of being disproved by other negative evidence."

47. Some of these objections do not apply in full force to the formally recorded confessions of India, whilst others apply still more forcibly. The sentence deserves the attention of all European Criminal Authorities in India. The natives already recognize the truths which it contains.

48. It has been observed to me that all these objections apply to Thanah confessions, not to confessions made before the Magistrate. They will apply less to the latter than to the former, but "artifice, false hopes, and promises" will easily persuade a prisoner to adhere at the Sudder Station to any statement which he has made in the mofussil. "Menaces" of course would have lost their power in a great measure. It is indeed this very [illegible] of faith on the part of the natives, in confessions taken by the Magistrate, which has led to these remarks.

49. The personal experience of any one individual upon such points as these, is insufficient to conduct [illegible] to a definite conclusion. Before any step is [illegible] the opinions of all the mofussil judicial officers [illegible] for, and, until they are received, it will be [illegible] the question proposed some time back, [illegible] whether the working of the experimental law [illegible] the extension of the principle upon which it was [illegible] The following observations refer to by far the [illegible] part of the subject—the *practicability of* [illegible]

50. The importance and variety of the numerous questions which immediately suggest themselves, the knowledge of English law and Indian *custom necessary to entitle* any one to form an opinion upon them, and the deep sense which I entertain of my own insufficiency, have almost warned me from entering upon the subject; but a beginning must be had somewhere, and fancy indulges the vision that, in recording these observations, whatever their intrinsic value may be, I am perhaps taking the first step towards the introduction of an improvement into the judicial administration of the country.

51. The first question, according to natural order, is, For what cases are juries required? Or in other words, What cases shall be tried with, and what without, them?

52. I propose that all trials in the Sessions Court, and all trials before a Magistrate, in which he can legally pass a sentence *beyond the limits* prescribed *by Section* 19, Regulation IX of 1807, shall be tried with the assistance of a jury. I see no better division than this; it is simple, and easily understood. *To extend the* new *mode of* trial over *all* cases in the Magistrate's Cutcherry would impede the transaction of business, and require too large a supply *of jurors: and, on the other* hand, the Magistrate could not consistently exercise the functions of a criminal Judge conferred upon him by Regulation XII of 1818, VIII of 1828, and the like, without juries, whilst the Sessions Judge is obliged by law to employ them upon all occasions. Some inconvenience might be felt in the Magistrate's Court, yet "let it be again remembered," says the author already quoted, "that delays and little inconveniences in the form of justice are the price which all free nations must pay for their liberty in more substantial matters." We have not to deal with a free nation; but we are endeavouring to treat them as if they were free, and "we are *conquering* them *into* the enjoyment of true liberty by insensibly putting them upon the same footing, and making them fellow-citizens with ourselves."

53 Supposing it to have been decided what cases are to be submitted to a jury, we are to enquire how that jury is to be composed All persons residing within the jurisdiction of the Court might be declared liable to be summoned to sit on the jury, excepting the following classes

1st Persons of infamous character

2nd Persons of weak intellect

3rd Persons of low caste

4th Paupers, or persons not possessing Rs —— per mensem, or its equivalent

5th Persons ignorant of the language in which the proceedings of the Court are conducted

6th Persons above 70 years of age

7th Persons under 21 years of age

8th Members of the Civil Service

9th Military men

10th Persons specially exempted

And all persons, with the exception of the first seven classes above numerated, shall be capable of sitting on juries, whether residing within the jurisdiction of the Court or not

54 On the first introduction of any new system, it would be desirable to encumber it as little as possible with details, and to leave it simple and comprehensive. If we were to attempt to determine those circumstances which constitute "infamy," or to enumerate the castes which are to be deemed "low," or to specify the persons to whom exemptions ought to be granted, [illegible] ourselves in a complicated mass of details [illegible] the risk of making mistakes, and we [illegible] that we had applied, to the whole country, [illegible] applicable only to particular parts [illegible] be left to the discretion of the [illegible] the Sudder Court would issue [illegible] thought calculated to carry [illegible] and every order passed might [illegible]

course of appeal. With such checks, it is reasonable to believe that no great inconvenience would be felt from the general terms of any rules which it might be thought necessary to prescribe; nor are we to forget that trial by jury has already been practically introduced, to a very great extent, without any rules at all.

55. It will be very difficult to supply the Magistrates with proper juries, and it would be well if they could be dispensed with altogether in those courts. I have already stated why this cannot be, as regards those cases in which Magistrates are Criminal Judges; and juries must therefore be provided for them. So long as the present excellent system obtains of trying a case the moment it is ready for decision, I do not see how it is possible to prevent the duty of sitting upon juries falling more heavily upon those who reside in the vicinity of the Courts, than upon those who reside at a distance. If jurors are to be brought in from all parts of the district alike, nothing less than a jury in constant attendance would meet the demands of the Magistrate; for his cases are required to be taken up immediately, and there would be no time for jurors to come in from the mofussil. Either the cases must wait, or the jurors must be kept ready. In this difficulty no better alternative presents itself than to allow the Magistrate to summon his own juries from the neighbourhood of the place in which he is holding his cutcherry. This is what would take place if no rules were laid down upon the subject, and if the authority who acted as Sheriff were left to procure the attendance of a certain number of respectable men, as in England. The consequence would be that the same individuals would be repeatedly impannelled, than which nothing can be more objectionable. The far better course would be to relieve the Magistrates from their duties as Criminal Judges; but this is, I fear, impracticable.

56. For the Court of the Sessions Judge juries might be summoned from any part of the district, as in England I

believe they are summoned from any part of the county, all that would be necessary is, that the Sessions should be held periodically A certain number of "good men and true" might be required to attend on the 1st of every month, and to remain in attendance until all the cases in the calendar had been disposed of At *present*, trials are held as soon as the attendance of the prosecutor and witnesses can be procured by the Magistrate *then*, they would all be brought on at the beginning of each month

57 The inconvenience to individuals would be much felt, and more complained of, but it would occur very seldom in the course of a man's life, and it is after all no more than every person is liable to, against whom his neighbour has cause of dissatisfaction, or whose evidence is required by litigants in any of our courts Their travelling expenses and subsistence might be allowed if demanded, but I do not think it would be necessary to grant any further remuneration

58 In preparing the "panel, the Magistrate of the district should perform the functions of a Sheriff, and the writ of "*venire facias* would be represented by a general precept to procure the attendance of a jury on the day fixed for holding the next ensuing Sessions

59 The equalization of the burthen of attendance imposed upon the people, by summoning them from all parts of the district, involves the abandonment of a position to which great importance has been attached by all the natives with whom I have conversed, namely, that the jurors should be kept in ignorance of the cases which were to come before them, up to the last moment *The time* of summoning the jury thus becomes a subject of consideration In England it seems to have been thought desirable that the names of the jurors should be given to the parties in Civil suits, and to the prisoners in some cases, in order that they might be "ready with their challenges, but in India the fear is that the jurors would be

tampered with, if their names were known for any space of time before the trial. The jurors who have sat with me, have rarely known that they were to sit at all until the morning of the trial. Their disinterestedness was thus secured, but great apprehensions have frequently been expressed to me by the natives themselves, that the same degree of integrity could not be expected if the jury were allowed time to become acquainted with the cases out of court. For this there is no remedy, unless the Sessions juries are collected as at present, and as it has already been proposed to collect the Magistrate's jury. We are placed between the horns of a dilemma; either we lay the whole burthen of attendance upon those who reside in the vicinity of the Sudder Station, for the sake of securing disinterestedness, or we expose the jurors to the chance of being tampered with, for the sake of imposing an equal tax upon all.

60. Of the two alternatives I prefer the latter. There is something anomalous, if not unnatural, in granting to the inhabitants of a particular vicinity the privilege, or in imposing upon them the duty of deciding upon the offences of the rest of the district; and I believe that means will be found of palliating the evil of exposing jurors to temptation. If the Sessions are held periodically, as suggested above, there will always be more than one case for trial, and the Judge might call on whichever he pleased, dismissing that jury as soon as they had delivered their verdict, and employing another for the next case, or, as in England, a much larger number might be impannelled than would be required to form one jury, and the names might be taken by chance. Challenges too must be allowed, of which I shall speak presently. The danger may be lessened by these and similar means, but the *time* which elapses between the receipt of the summons by the juror and the trial, should be made as short as possible. It is to be hoped that in after years these precautions will be found to be superfluous.

61. It will not perhaps be necessary to fix any exact number as the only one of which a jury can be legally composed. A Magistrate's jury might be less numerous than a Judge's, not only because his cases are more trifling, but because he is supposed to require juries oftener; and, under the view of the matter taken above, because the members being ordinarily summoned from the same neighbourhood, each individual's turn will come round more rapidly than if they were summoned from the district at large. No jury, however, should consist of less than five or six, or of more than twelve or thirteen, according as odd or even numbers may be required, nor should any jury be found without a due proportion of Mahomedans and Hindoos.

62. The Magistrate being by law empowered to "cause attendance," there can be no fear of a trial being stopped for want of a jury; but as the process should ordinarily amount to no more than the service of a notice, parties neglecting to attend should be liable to be fined. The fine should be realized by distraint only, and under no circumstances should the defaulter be subjected to personal imprisonment on account of non-attendance, or non-payment of the forfeit. Further, to make this new duty fall as lightly as possible on the people, any person summoned may be declared at liberty to provide a substitute, it resting with the Magistrate to determine whether the substitute be fit to sit upon a jury or not.

63. The privilege of challenging should be retained, though not exactly as it exists in England: as there is greater probability of jurors being prejudiced in India than in England, so is there the greater necessity for the preservation of this safeguard; and it is consonant with the very first principles of justice that these Judges, for they are no less, should not be biassed against the prisoner. The Magistrate will already have too much power in preparing the lists, and our little intercourse with the natives

will incapacitate *us* from detecting the objections to any particular juror as readily as we might do in our own country. I hold it therefore highly expedient to extend to prisoners the right of challenging under certain modification.

64. The Magistrate, acting as Sheriff, must in this country and for the present, be assumed to be an "indifferent person" and therefore challenges to the array need not be allowed. It will never occur to the natives to demand such a privilege, and they will deem every purpose answered if they are permitted to object to individuals. Challenges are of two kinds.

1st. Peremptory challenges.

2nd. Challenges for cause.

65. The former of these should be allowed to the prisoner only, and to what extent, may be determined hereafter. The English law allows a great many challenges, and once allowed still more; but no such license will be required in India, where a single peremptory challenge will be an extraordinary occurrence. To the number of challenges for cause shown there should be no limit, of course; and the privilege might be extended to the prosecutor, the Magistrate or Judge presiding in the Court in which the trial was about to be held being authorized to decide finally upon the sufficiency of the causes assigned, and either to direct the challenged juror to take his seat, or to supply his place from the names remaining on the panel, or from elsewhere. The privilege of peremptory challenges might perhaps be confined to the Court of the Sessions Judge. I am afraid of hampering the necessarily rapid proceedings of a Magistrate's cutcherry, and, had it been possible, their names should have been mentioned only as the parties to whom it is proposed to confide the duty of returning the panel: they are, however, so completely Criminal Judges in some cases, that it seems unavoidable to extend to them the rules enacted for other criminal courts.

66. It has been my invariable practice of late years to invite challenges from both parties. First the jurymen themselves are called upon to declare if they have any acquaintance or connexion of any kind with the prisoner. On receiving an answer in the negative the prosecutor is asked whether he objects to any of the jury, and finally the same question is put to the prisoner. In no one instance has either party availed itself of the opportunity thus afforded.*

67. I do not think that any oath or solemn affirmation would influence the members of a jury. If they were base enough to betray the trust reposed in them, they would not be deterred by a preliminary appeal to the deity; and therefore it seems better to give in to the prejudice of those natives who object even to solemn declarations, and to dispense with the ceremony altogether.

68. The treatment of jurors, when selected and ready to enter upon their duties, may seem a very minor point; but it is not so unimportant as it sounds: some rules are required as to the manner in which they should be treated during the sitting, by which uniformity of practice would be ensured and discussion anticipated. They will of course be provided with seats, and supplied with copies of the calendar in the Persian and Nagree characters; and a memorandum should, for some time to come, be placed in their hands or read aloud to them, stating, not what their duty is, for that they very well know, but in what manner they are to perform it. To an Englishman it may seem superfluous to tell a juryman that he is not to interrupt the counsel, or the Judge, who is examining a witness, or to express his half-formed opinion before the case is ended, or to leave his seat without cause, and the like; but the ideas of the natives are drawn from their behaviour on punchayets, and there all these irregular practices are common. Their feelings would be hurt by any abrupt pro-

* *Note*.—Since these remarks were written, I have met with a few instances of challenges.

hibition conveyed to them in open Court, and it is but fair to tell them what we require of them beforehand. Besides, the object is to induce the natives to serve cheerfully upon juries, not to force them to do so. Englishmen grumble at being compelled to attend; but they understand their own importance when they are once in the box, and they behave accordingly. My own experience leads me to believe that the natives of India, if carefully managed, will behave precisely in the same way.

69. Nothing can be held to be of little moment which concerns the mutual behaviour of Judge and juries; otherwise, I should have passed over these, comparatively speaking, minor points. There is however one concession which I found myself obliged to make unwillingly. I allude to the regular practice of almost all Mahomedan jurors to retire, for the purpose of praying, without any reference to the proceedings of the Court. Knowing very well that slighter causes had often persuaded them to postpone their ceremonies, I was tempted to attribute these ostentatious devotions to some motive other than pure piety, but so many objections were made that I gave up the point, and latterly have always allowed jurors to retire to say their prayers.

70. Should the trial extend beyond one day, the jury must be permitted to separate, and to return on the following day when the Court may open. The objections to this are on the surface, and they apply more strongly in India than in England. There is only one reason for allowing the indulgence, and that has already been repeatedly alluded to. The duty must be made as easy and agreeable to the natives as possible, and we must do all we can to win them into the appreciation of it. They would not readily admit the necessity of remaining together all night; for, still drawing their ideas of juries from their own punchayets, they would regard themselves as assessors or assistant Judges rather than as jurors; and yet it is as

jurors only that their services will be found so peculiarly valuable

71 Following the course of a trial, we now come to the summing up of the evidence by the Judge, if such a proceeding be thought fitting or practicable I do not think that it ought to be attempted and I speak with a full knowledge of the great attainments of many of the Company's Civil Servants when I express my fears that the generality of the Judges would hesitate to charge a jury in the Hindoostanee language It is not an easy thing for any man to do well, whatever advantages he may have derived from education and example, and if attempted in the present state of our knowledge and practice, we should run the risk of doing more harm than good I rarely attempt it, and when I do, my remarks do not constitute anything approaching to a "charge," which I conceive to be a comprehensive and argumentative abstract of the whole case, accompanied by the Judge's comments upon such parts as appear to require them, but they are confined to the few isolated observations, the necessity for making which has forced itself upon me in the course of the trial The most profound and most respectful attention has ever been paid to me upon these occasions, yet I avoid them whenever I can, for I fear lest the jury should avail themselves of the supposed opportunity of discovering my sentiments as to the guilt or innocence of the prisoner, and *that* should be carefully concealed from them until they become more accustomed to the independent exercise of their own judgment

72 Nevertheless it is frequently very necessary that observations should be made to the jury before they retire to consider their verdict, and this will be readily allowed without the production of instances The best way is to make the observation at the time when the necessity for it suggests itself, the jury will understand it much more easily *then* than at any other time, and any little error of

language will be less likely to bear upon the verdict, than if it had been uttered immediately before the jury left the box.

73. Whatever may have been the origin of requiring unanimous verdicts from a jury, it is admitted that nothing so contrary to reason could ever have been the object of direct enactment. It may have been necessary, out of a larger number, to find twelve men who were satisfied with the proof adduced, before sentence could be passed, or it may have had its rise in the twelve compurgators of the canon law, persons who swore that from their knowledge of the prisoner's general character they believed him to be innocent. Certainly, this state of things must have come about by slow degrees, and monstrous as it sounds, might, like many other obscure parts of our common law, become more intelligible if we knew its history. No ages were ever so dark as to demand *directly* that twelve men not agreeing in opinion should be locked up, or fed on bread and water, till they did agree! They might be compelled to give in an unanimous verdict by some still shorter process, but beyond this they could not get without a miracle. The only method by which the present system can be reconciled with reason, is by supposing the law to mean that, unless the proof is so clear as to carry conviction to the minds of all the twelve men impannelled, a verdict shall be found for the prisoner—an explanation, which I believe to be unsupported by written authorities or by practice.

74. What attention then is to be paid by the Court to an unanimous verdict? And what attention to verdicts in which only a majority of the jurors agree? When I first considered this subject I entertained the idea that unanimous verdicts might be held to be final. Subsequent observation has shaken that opinion, and I confess I am now afraid to go so far. The least that could be done is to require that all cases, in which the Judge differed from

an unanimous jury, should be referred to the Nizamut Adawlut, which after all is merely placing the jury on the same footing, in regard to the weight to be attached to their opinion, with the Mahomedan law officers who used to sit on criminal trials. It will increase the quantity of work in the superior court, but that is foreign to the present question; and moreover there is great necessity that this labor should be imposed upon them, since, as the law now stands, the power of the Judge is too great. Formerly, if the Mahomedan law officer and the Judge differed, the case was necessarily referred to the higher tribunal: but now if the jury unanimously disagree with the Judge, the latter has the power to pass sentence according to his own individual opinion. The only answer to this is that the prisoner can appeal, and, if it were as easy to make the appeal as to talk about it, the answer would be sufficient.

75. If it would not impose too much additional labor on the Judges of the Nizamut Adawlut who certainly ought to have *time to think*, I should like to see those cases also made referrible to them in which the mofussil Judges differ with the *majority* of the jury. The number of cases, to judge by my own experience, would be very few, and they might be made still fewer by authoritatively fixing the proportion which shall constitute such legal majority.

76. The last step in a trial is the delivery of the verdict. On the conclusion of the trial the jury should retire, as they do in England, and should not deliver their individual opinions at once, as they are sometimes permitted to do in this country. By giving them an opportunity of discussing the matter amongst themselves, unanimity is frequently obtained, for any erroneous impression is by this means easily removed from the mind of the dissentient party, or some point which had escaped him is brought prominently forward to his notice. I fear that if called upon to deliver their sentiments one by one, without retiring, the second speaker would on some occasions adopt

the opinion of the first speaker from timidity, from the fear of standing alone. Some of the Hindoos would be peculiarly obnoxious to this weakness, which would not affect them in the same degree were they seated in a room by themselves. As the practice now obtains, juries sometimes deliver their verdict by word of mouth, and sometimes in writing. It will tend to prevent discussion, at a moment when it would be very ill-timed, if they were required always to give in a written paper; more especially as the courts would sometimes be compelled to receive conflicting opinions, the verbal delivery of which would provoke conversation and tempt the parties to support their opinions by argument. Such a proceeding might of course be stopped by a Judge, but it is better to prevent, than to check, the indecorum.

77. Juries should find a general verdict if possible, stating no more than that the accused is guilty or not guilty of the crime named in the calendar: and, in the event of their not being able to bring in such general verdict, they should be permitted to find a special verdict, declaring the *facts* which had been proved, and leaving it to the Judge to declare what offence these facts constituted, and what penalty the law attached to that offence.

78. Some of the changes which have been suggested in the course of these notes, would require a new law to carry them into effect, and, whenever the legislature may take the propriety of such an enactment into their consideration, many subjects, which have not been alluded to, will demand their attention. Of this description is the responsibilities of juries.

79. The Judges in England were in the habit of interfering with the decisions of juries up to a much later period than any one would suppose who contemplates their present independence. Sir William Blackstone says, they were "fined, imprisoned, or otherwise punished, for finding their verdict contrary to the direction of the Judge." Even

in India, we have passed the period when such contradiction could be tolerated, but still, it may be necessary to establish some check to the dishonest exercise of their vast power by the juries There would be no occasion to provide for the setting aside of a false verdict by *attaint*, since the authority of the Nizamut Adawlut remains unimpaired, and is competent to remedy all such mishaps as soon as they become known but individual members of the jury may be declared liable to be brought to trial for wilfully and knowingly giving in a wrong verdict, in consideration of some advantage, direct or indirect, present or prospective, accruing to themselves No one except the Government should be allowed to prosecute No public officer should be competent to direct a prosecution in their name without the sanction of the Nizamut Adawlut, and no trial should be held elsewhere or otherwise than in the Sessions Court before a special jury

80 There is a class of persons amenable to the criminal laws enacted by the Government of India, whose interests are deeply involved in any alteration which may be introduced into the present system All Europeans not being British subjects, all Americans and all East Indians, are by Section 5, Regulation VI of 1832 liable to be tried by the Regulation law, and would all frequently object to be tried by a jury of Mahomedans and Hindoos Any enactment, unconditionally declaring that such persons should be tried by a jury composed of persons not being Mahomedans and Hindoos, would run the risk of stopping the trial altogether in some districts, and I see no better alternative than a proviso that *in such cases the returning* officer shall impannel as many jurors as possible of the same class with the prisoner, leaving it after all optional with him whether he will be tried by such jury as the district affords, that is, "by the country, or by the Judge alone The number of foreigners who would come before the courts is so exceedingly small, that rules might be

framed for trying them at particular stations where there will be no difficulty in forming a European jury, and then it would be easier to legislate for the single class of East Indians, who would be left. Any such sub-divisions are in themselves objectionable, and should be admitted only where the necessity is imperious.

81. The provisions of Regulation VI of 1832 have been very generally introduced into the North Western Provinces. By a memorandum, for which I am indebted to the present Register of the Sudder Court, I observe that in 1843, out of about 1500 trials, upwards of 1000 were held under Regulation VI, and striking out the districts of Delhi, Benares, Saugor and Kumaon, it appears that of 1099 cases only 109 were tried without a jury. As this has been going on for fourteen years, (though perhaps not always to the same extent,) the Nizamut Adawlut must be in possession of data upon which to form a judgment as to how far the Regulations have supplied the place of a criminal code. The instances in which they have been found wanting will be indicated by the number of cases referred to the Nizamut Adawlut under the proviso contained in Clause 1, Section 4, Regulation VI of 1832, and if it shall appear that no such cases have been referred, the inference will be that, as far as the experiment has been tried, the Regulations do constitute a criminal code, without there being any occasion to draw upon the Mahomedan law or the Nizamut Adawlut on account of cases not therein provided for.

82. I have attempted in this paper to explain the grounds upon which I hold it desirable to introduce trial by jury, or punchayet, more fully into the criminal courts of India: I have stated the result of my own experience of the working of the experimental law passed 14 years ago; and I have ventured to propose some of the arrangements and provisions which will be necessary whenever it may be determined to extend the principle of that law,

or even to fix the mode of proceeding under the law as it now stands.

83. At one time I contemplated drafting a Regulation on the subject of these notes, and submitting it to the Nizamut Adawlut under Regulation XX of 1793, but the number, difficulty, and variety of the subjects involved deterred me from expressing myself in the categorical language suitable to a legal enactment. A perusal of the minutes recorded previous to the promulgation of Regulation VI of 1832, and an examination of the returns made during the last 14 years to the Nizamut Adawlut, or a knowledge of the results of the experience of others, might change my opinions upon any one of the points which have been noticed. I by no means imagine that the view which I have taken must *necessarily* be sound, nor that the opinions which I have expressed must *necessarily* be adhered to when their fallacy shall be made apparent.

H. LUSHINGTON,

Sessions Judge of Futtehpoor.

No. 2.

NOTES ON THE CRIMINAL STATISTICS OF THE UPPER PROVINCES FOR 1844, AS COMPARED WITH THE ENGLISH CRIMINAL STATISTICS FOR 1841.

By St. George Tucker, Esquire, C. S.

1. The English Criminal Statistics selected for comparison are those for the year 1841, in which the last census was taken. The Indian returns annexed are for 1844, and the census was taken at the commencement of the present year. It is the most accurate yet made; it shows that the population of the six divisions of the North Western Provinces amounts to 1,94,64,008 souls. The returns are partly furnished by the village record-keepers, their accuracy being tested by the tuhseeldars and canoongoes, partly by the chief inhabitants of the towns, and partly taken from the census made in 1837, by the revenue surveyors, which is not considered very accurate. Much difficulty occurs in framing a correct census. The population is often calculated by counting the number of houses, sometimes by counting that of the male adult population, and sometimes that of the whole adult population. This difficulty arises partly from the jealousy of the people, who distrust the professed motives of Government, and partly from the danger of oppression to which the mass of the people are liable from our agents. A rough estimate is therefore all that can be attempted.

2. In the annexed returns, the English classification of crime has been followed as nearly as possible. Few offences are defined by Indian regulations, and many which are, are defined differently from those of the same denomination in England; and a large amount of punishment is inflicted for offences included in the Magistrate's statements under the general head of "Miscellaneous." The number of titles is not only increased at the will of

the Magistrates, but the offences are themselves classed and defined variously in different districts For instance, some offences are punished under the following titles —

Blackening a man's face

Attempt at selling a *lawaris* female

Answering to a charge of Koje brought against their village

Lying and prevarication

Taking five rupees from the plaintiff after rendering him intoxicated

Insane persons

Suspicion of various crimes

Poisoning dogs

Throwing into a well

Killing a cow for the sake of its hide and flesh

In the arrangement of comparative statements, this power of making and denominating crime at pleasure leads of course to much confusion

3 Another difficulty which arises in arranging criminal statistics is caused by the ignorance which exists of the amount of crime committed, owing to the inefficient state of the police The returns merely show the number of convictions in cases brought before the courts There is no doubt, from the character of the presiding officers, that these convictions may be depended upon as proofs of the extent of crime , but there is equally no doubt, that the perpetrators of a large proportion of crimes committed escape undetected and unquestioned

4 The English returns are divided into six parts, five classified and one miscellaneous

OFFENCES AGAINST THE PERSON

5 It appears that the number of heinous offences of this class is greater in India than in England

The comparative frequency of murder in India (of which many cases are associated with robbery and theft,) considering the large number of acquittals (nearly 27 *to*

every 10 convictions,) and our defective information (of which the discovery of Thuggee afforded a proof,) is very remarkable.

With reference to assaults in India, the distinction lies between assaults with wounding, and petty assaults; in England between assaults committed for trial at the Assizes and those summarily disposed of.

In attempts to procure miscarriage little effort appears to be made in either country to convict. In England there were no convictions.

Convictions for sodomy and rape, and attempts to commit such, are more numerous in England than in India; partly owing to the difficulty of conviction in the latter country, (the acquittals being nearly three times as numerous,) partly to the little trouble taken to prosecute for such offences; and partly to the difference of the native customs from our own; the difficulties in the way of marriage being greater in England than in India.

The greater number of cases of abduction in India would in England be cognizable only by the Civil Court. Many cases of adultery are furnished under this head when the wife elopes from under her husband's roof, and the latter does not demand her punishment.

In England child-stealing is but little known, as there is no incentive to its commission. It is remarkable that in these provinces upwards of two-thirds of the convictions have been for offences committed in the Benares Division.

There are upwards of twice as many heinous offences against the person in India as in England: the following causes are assigned to account for this difference.

Total of No. 1 excluding item 15.
In England, 1384 convictions.
In India, 3068 convictions.

I. Human life is considered of less value in India than in England. The commission of heinous offences against the person is looked upon with less horror in the former than in the latter country: the different stage of civilization in

the two countries, and, above all, the difference in religion, fully account for this.

II. The very general practice in India of wearing arms, which is obsolete in England. This cause will apply especially to man-slaughter, and even to premeditated crimes. Where the instruments of commission are not easily procurable, many which are designed will be left unexecuted, and many which are executed will be more easily detected. In England, the gun, the pistol, and knife even, are often recognized: in India the spear, sword, or club (*lathee*) can seldom be satisfactorily identified.

III. Subjects of England are deterred from the commission of heinous offences by the superiority of the police in detecting them.

IV. The inappropriateness of many of our laws to the customs and feelings of the people. The people find much difficulty in obtaining redress in our courts for adultery, seduction, and other crimes, which have reference to their domestic life. They sometimes gain justice by prosecuting for a different offence; many cases of adultery, it is believed, are punished as attempts to steal, or as trespass; but in most cases they take the law into their own hands, and crime in India would be much greater if many offences against domestic rights were not prevented and punished by punchayets, native juries unrecognized by law.

In India, convictions for petty assaults are not comparatively numerous. The reason is that the police cannot take cognizance of this offence, and by the orders of Government, fees in the shape of stamp paper are usually levied from plaintiffs before the magistrate can do so. This is done with the object of preventing complaints being preferred on false or frivolous grounds. The natives of India have their passions more under control on trivial occasions than those of England, though they are more violent when fully roused.

In England, 9383 convictions.
In India, 5620 convictions.

There is little to remark on cases of resistance of process. The number of convictions differs little in the two countries. Under strong and well constituted Governments, respect will always be paid to the execution of the law.

OFFENCES AGAINST PROPERTY COMMITTED WITH VIOLENCE.

6. By Indian law, simple burglaries and thefts (*vide* Regulation II of 1832,) cannot be taken cognizance of by the police, unless the complainant himself prosecutes, which he will seldom do, unless he thinks that there is a probability of recovering his property. Many of these crimes, therefore, are never reported, and a small proportion only (37 per cent.) of those which are reported, are prosecuted in the magistrate's court. In entering the number of crimes committed in England under the head of burglary, many have been included which would not be considered burglary by English law, as having been committed in ware-houses and other places, where no one resided, or as having taken place in the day time; these circumstances do not apply to the definition of the crime in question according to Indian law. Another cause of the large amount of this crime in India is owing to the unprotected state of property: mud walls and ill-fastened doors offering but little opposition to the burglar. Considering the small ratio which the cases tried in India bear to the amount of crime, it is evident that the latter is much greater in India than in England.

The acquittals for burglaries with violence, in India, are nearly three times as numerous as the convictions.

The most common kind of dacoity is unkn own in England, *viz.*, armed men robbing in bodies; and the existence of such in India is the clearest proof of the inefficiency of the police. There is reason, however, to believe that England owes much of her immunity from these outrages to her paper currency. Natives of India think that riches consist in the amount of gold and silver which they pos-

sess Their houses are insecure, they are apathetic in defending themselves and assisting each other Dacoity differs from highway robbery, inasmuch as the former is an assault upon families in their own homes and among their friends this is a very serious offence, and, where prevalent, all feeling of security is destroyed It should be remarked that 72 per cent of the persons tried upon charges of dacoity and robbery are acquitted, and the number of untried offenders must be large

Theft with wounding does not exist in England where thieves seldom make their depredations armed The violence is the consequence of the theft, not the means of committing it, but as violence is committed, it is included in this class of crimes

Dhurna is a species of extortion, and under the latter designation are included exactions by the police The crime consists in attempting to obtain by threats of injury to person, property, position in society, or state after death, any real, fancied, or pretended rights Extortion differs from oppression, since in the latter, actual violence, besides threats, is employed In England this offence is almost unknown, the law is better understood, and punishment for the infraction of it, (as in cases of oppression,) tolerably certain Natives are timid, they shrink from being outcasted, and they shrink from hostile collision with Government servants, they are therefore equally submissive in obeying the demands of the priesthood who work upon their superstitious fears, and of society, which can withhold from them social happiness, as well as in conceding to the exactions of the police

Oppression is the attempt to realize by violence any real, fancied, or pretended rights, by illegal means By it is understood illegal duress and forcible dispossession, the former including confinement and deprivation from food, the latter, the violent seizure of property in the possession of another Although no legal definition of this

offence has been promulgated, yet it is believed that the above is the one most generally adopted. Oppression is therefore included in this class of crime.

OFFENCES AGAINST PROPERTY COMMITTED WITHOUT VIOLENCE.

7. The crime of cattle-stealing is less frequent in England from the severity of the punishment, the difficulty of committing it, and the greater certainty of detection,—the acquittals in India considerably exceeding the convictions, particularly in Rohilkund, where the offence is most common.

The proportionably small amount of convictions for larceny in India, is partly accounted for by the explanation above given of the small number of convictions for burglary; unlike burglary, however, inasmuch as the number of larcenies is believed to be less than in England with much more temptation to commit them. In India property is in-doors very inefficiently secured; the means of fastening doors and boxes offering but little resistance to depredators. Out of doors, women and children, the most helpless portion of the community, adorn their persons with a large portion of their property in the shape of gold and silver ornaments, which they expose to general view, as though to invite the cupidity of thieves.

It is believed, as above-mentioned, that some of the convictions under the head of attempts to commit larceny in India, are in reality attempts to commit adultery.

Embezzlement and fraud, from being undefined, are often incorrectly and differently considered by magistrates, and the amount therefore of recorded convictions cannot give a very accurate idea of the extent of crime.

The proportion of convictions, for "receiving stolen goods," to the population of either country is nearly the same. Receivers create and foster theft; but as it is often difficult to prove the *furandi animus* on their part (in both countries, the acquittals exceed the convictions), the extent of this crime is best estimated by a reference to that of larceny and burglary, the extent of which, in consequence

of the operation of Regulation II of 1832 cannot be accurately ascertained

MALICIOUS OFFENCES AGAINST PROPERTY

8 Arson is at all times a crime very difficult to prevent and as difficult to detect It is surprising that in England only 16 persons were convicted of it during 1841 In India efforts have been frequently made to put a stop to the crime, for it causes much injury, since from the inflammable nature of dwelling houses, fires are with difficulty arrested in their course The convictions, though double those in England, are only one seventh part of the acquittals

The number of convictions for other malicious offences in India cannot be considered a sure index of the amount of undefined crime.

FORGERY AND OFFENCES AGAINST THE CURRENCY

9 There is in India no paper currency, and less property than in England depending upon written instruments Conviction is difficult, the acquittals being nearly twice as numerous

Almost all the convictions under the second heading of this class are cases of possessing bad rupees, for which the offender is only subject to a light fine The punishment being slight, it is inflicted without hesitation

OFFENCES NOT INCLUDED IN THE ABOVE CLASSES

10 Considering that in most cases of breach of the peace there are several offenders, the amount of crime under that head does not appear to be great

There are upwards of twelve times as many convictions for *prison breaking* in India as in England This is partly accounted for from the known corruptibility and negligence of the guards, and from the insecurity of some of the gaols, but most of the convictions are in cases of escape from the roads, of which chance the convicts in England have not the benefit.

"*Perjury* in India is *an offence quite distinct from the* crime of the same denomination in England. Religion, morality, and law, have here little influence in preventing it. The oath which has been prescribed for use in our Courts does not appeal to the religious feelings of the natives. The former rule of swearing on the Koran or Ganges water might have had some effect; the present oath has none, and most witnesses suppose that in taking it they are merely going through one of the forms of our Courts. Again, native morality and public opinion afford little check to departure from truth in giving evidence. If the punchayets could be induced to out-cast all perjurers, the crime would be checked; but while they outcast men for the veriest trifles, they encourage rather than discountenance false evidence: the merit of a man's assisting one of his own caste overweighs the immorality of a falsehood, which cheats the judgment of the magistrate. Law is seldom brought into requisition to punish and thereby prevent perjury. From the severity of the punishment imposed (which neither religion nor public opinion justifies) Sessions' Judges will rarely convict even on full proof, and magistrates, therefore, seldom commit unless the offender contradicts himself on oath, or shows otherwise gross disregard of facts. Of one thing there is no doubt, that the number of convictions for perjury bears no proportion to the perjuries well-known to be committed every day. As one proof of this, there are nearly twelve times as many convictions for false complaint as for derjury, from which in reality it does not differ. In all these cases it is evident that, if the witnesses have not perjured themselves, the complainant expected that they would do so; and allowing an average of two witnesses in every case, a slight idea may be formed of the state of evidence in our Courts. Formerly, perjury was punished by the magistrate as prevarication, under the head of contempt of Court and it would be interesting to know how many

persons were thus annually punished Further, in most well-founded complaints, the defendant rests his defence upon false evidence, on questions of fact, since the law is too simple and plain to leave hope for acquittal by pleading any nice points in it The only means of obtaining the truth is by cross questioning the witnesses, it is always easier to relate a true story than to make up a false one, but even this hope in many cases fails Not only does the amount of business render it difficult to give sufficient time to elicit the truth, but in many instances it is impossible to do so In simple cases of assault, the complainant's witnesses are well instructed as to the place, date, time, and parties present at the place of assault, and the defendant's, as to the place, date, time, and parties present at another spot, and they will probably evade any further questions by pleading total ignorance

The results of the *Customs Regulations* in India are remarkable Thirty millions sterling are collected in England by means of the Customs and Excise duties In the North Western Provinces only half a million is collected by the same means, and yet the convictions for offences against the laws made for securing this comparatively small amount are upwards of four times as numerous as in England This appears to be almost entirely owing to the duty upon salt, which is very high in proportion to the value of the article outside of the Customs line Salt is a necessary of life in India, and will always find a ready market, and when large profits can be made, it is not to be wondered at, that the revenue laws are so generally broken Salt is illicitly manufactured, especially under the pretext of manufacturing Saltpetre, but the greater part of that which succeeds in evading the duty is smuggled from native States, which trade must doubtless be profitable *The only risk incurred is the danger of being* apprehended by corruptible and negligent Custom guards on beats, where the smartest men would find it difficult to

prevent smuggling by night. The only wonder is, that smuggling is not so extensive as to drive the legitimate trader from the market, and this can only be accounted for by the extent of the demand.

Trespass is an offence which has not been defined by Indian law, and the amount of convictions under this heading cannot, therefore, be considered conclusive as an index to the extent of the crime.

If under the head of *bad characters* there be included the English returns of "want of sureties," and "known or reputed thieves," there will be a much greater proportionate amount of crime than in India. The law in force in the latter country does not permit punishment upon mere presumption or suspicion. The reputation of being a thief would not justify punishment, unless it were shewn that the defendant has no honest means of livelihood, or is in possession of suspicious property, for which possession he cannot satisfactorily account.

Gambling exists universally, but is seldom punished, unless combined with proof of the parties being bad characters, or of their making a trade in gambling.

11. There is a class of offences in India which is not taken cognizance of by English law that of *misconduct and neglect of duty by public servants.* In England, if a Government servant does not perform his duty satisfactorily, his discharge is considered a sufficient punishment. In India the difficulty is not for the servant to find employment; but for the State to get good servants. Not only is the servant inadequately paid; but if discharged from an appointment in one district, will be (if intelligent) tolerably certain of obtaining employment in another, and is often entrusted with responsible duties, the mal-discharge of which will yield a profit greatly exceeding the amount of his salary. It is therefore found necessary to add to discharge from service, punishment of fine and imprisonment; and from the returns it appears, that there have been nearly 7,000

convictions on this account alone the greater number referring to chowkeedars, who are often punished when the real offenders cannot be discovered, in order that some thing may appear to have been done in the case

12 Of the total of convictions for punishment of offences, which are common to both countries, the proportion is in England 1 to every 363 inhabitants, and in India 1 to every 830, of offences which are not common to both countries, in England 1 to every 387, and in India 1 to every 2,375 With reference to the latter, notice has been already taken of those offences requiring it, such as adultery, and misconduct and neglect of duty by public servants Until the rest of the offences are defined by law, the returns of their amount must continue useless for comparison

13 It appears that out of 31,637 persons punished in India, no less then 29,213 were summarily punished by the magistrates, by fine or imprisonment, for terms not exceeding three years The magistrates thus award the punishments of about 92 per cent of the total number of convicted offenders The proportion of summary convictions in England is much less, being 64 804 to 20 280 committals or 76 per cent of the total amount In conclusion, it must be remarked, from these comparative returns, that with reference to the state of crime in the North Western Provinces, increased efforts are necessary *to put down heinous offences against the person*, and some enactment is required to purify the evidence adduced in our Courts

St G Tucker

No. 3.

REPORTS ON TUSMA-BAZ THUGS.

LETTER No. 17 OF 1848.

From R. MONTGOMERY, ESQ., *Magistrate of Cawnpore, to* R. LOWTHER, ESQ., *Superintendent of Police, Allahabad Division, dated Cawnpore, the 21st February 1848.*

SIR,—I have the honor to inform you that a party of men have been taken up at Boolundshuhur, principally residents of Cawnpore, some of whom are charged with Thuggee. They form a portion of a class of men well-known to the authorities here, and I have drawn out a statement regarding them, which I beg to annex; as also a copy of the depositions of one of their body: also lists of all the members composing the gang, and a statement of certain property and money that have been received from some of their members, since I have heard of the capture of the party at Boolundshuhur.

2. I purpose sending vernacular copies of Sheikh Ghazee's depositions, and a proceeding, (embracing the details noted in my memorandum,) to the authorities of those districts where these people seem generally to have frequented.

3. The 19 men now in custody I propose retaining till such time as I hear whether they are claimed, and in case they are not, I shall require them to give good security before I release them.

4. You will observe that only five of the gang have not been apprehended. Two are so infirm that I have left them in their houses. The five now absent will soon be in custody.

I have, &c.,
R. MONTGOMERY,
Magistrate.

CAWNPORE,
21st February 1848.

MEMORANDUM

Shortly after the British Government acquired possession of this province, A D 1802 3, one Creagh, a private in a King's Regiment stationed at Cawnpore, initiated Dhown kul Aheer, an artillery man, Suhiboo, a cook in one of the regiments; and Ghunseya Bowryah, a resident of the Cantonments, into the art of Tusma bazee,* one of the numerous games practised by thimble riggers in England.

From these men sprang three gangs, of which they were the leaders Dhownkul's gang some time back merged into the other two gangs, and the two leaders at present are, Collunder and Madar Lodha, both now in the Boo lundshuhur jail charged with Thuggee

The gangs amount in all to about 47 persons who reside partly in the cantonments of Cawnpore but mostly in the out skirts of the city They are well known to the autho rities, and although they have been punished over and over again as gamblers, and sometimes confined for want of being able to furnish security for good behaviour they never have been taken up till now as parties to any very serious crime On receiving intelligence that a party had been apprehended in the Boolundshuhur district, charged with the crime above noted, I gave directions for the apprehension of all the gangs present at Cawnpore, and I append to this statement a memorandum showing the names of the individuals composing these gangs I also annex a translation of the deposition of one of their number, which I had taken before me

These men frequent the great thoroughfares leading to the principal cities in these provinces They attend also the great fairs Formerly they had free access to the city of Gwalior, and the Kotwal got 1-4th of their profits, but since

* The *game* is played thus a strap is doubled and then folded up into different shapes The art is to put a stick in such a place that the strap when unfolded, shall come out double

the British have occupied it they have been excluded. They never can successfully carry on their gambling till they have gained over the police in their favor; for crowds always collect around them and attract notice. Their mode of proceeding is as follows:—They assume different characters, and agree to meet at a general place of rendezvous, which is commonly some serai, where they are known to the bhutteearas. This they make their head quarters for a time; and, in the day time station themselves where they are most likely to attract notice, and begin to play as if strangers to each other, assuming different garbs. The unwary traveller eyes them for a time, and is tempted to try his luck; at first they allow him to win and then fleece him of everything. The leader gets a double share of the profits and all the rest share equally. The leader is bound to support the party at first setting off, till a sufficient sum has been won to enable each man to support himself. He is also obliged, in the first instance, to have a sum with which to commence playing. If any of the party are taken up, it is the leader's duty to do his utmost for his release, and for all sums expended in the effort he is to receive two pice interest in each rupee. After a successful day's work, they generally drink and gamble amongst themselves. It was during one of these revellings that a number were captured at Boolundshuhur: several escaped, and are now here in custody.

The following is some of their cant, by the medium of which they communicate with each other:—

"*Dhuraye.*"—When they are sitting on the road side, and see a traveller coming up, they say to one another "Dhuraye."

"*Tarade.*"—Begin to play.

"*Asrade.*"—When any traveller loses, and gets quarrelsome they say "Asrade;" this means, "give him back his pice."

"*Hackeri*"—If any European gentleman comes up, they say "hackeri aya."

"*Baurinala*"—When they see a burkundaz coming they say "bauriwala."

"*Hausnalla*"—If a sowar, then they say "hauswalla."

"*Tholah*"—When a thannahdar, tehseeldar, or any person of consideration approaches, the word is "tho lah."

"*Beli*"—When one gambler causes the arrest (on any ground) of another, his companions say by way of reproach, "why do you cause 'beli,'" that is, *suspicion* against us.

It is easy to conceive that gangs of this kind would not, when the opportunity offered, resist the temptation to rob, or even murder, and for some years past they have gone more to westward than usual, more particularly during the late campaign. I seized the books belonging to their banker, and was enabled from them to trace ornaments to a considerable value, which had been received at different times from different members of the gang, and left in pawn for money advanced. Each entry had the word "Tusma bazee" prefixed. These ornaments are now all in my possession, and lists have been made out for the purpose of being circulated through the different districts, as some of the property may be recognized.

Hoondees to the amount of Rs 750 have been received at different times within the last year from different members of the gang. The principal remitter is one Sheikh Chand, a brother of Collunder's, the mess khansamah of a European Regiment at Meerut. The whole sum has been recovered, and is now in my possession.

R. MONTGOMERY,
Magistrate.

Cawnpore, February, 1848.

Deposition of Sheikh Ghasee, taken before R. Montgomery, Esq., Magistrate of the District of Cawnpore, February 14th, 1848.

My name is Sheikh Ghasee; my father's Sheikh Ikram; by caste, Sheikh; my occupation, service; inhabitant of Kheirabad, in Oude; but at present residing in Bacongunge; my age is thirty, or thereabouts.

QUESTION.—*What have you to depose?*

ANSWER.—Fifteen months ago (I was in prison at the time), one Madar of the Lodha caste, living in Bacongunge, went with his gang towards Etawah for the purpose of "Tusma-bazee."

His gang consisted of 12 or 14 men. They went about gambling with the Tusma for three months between the Ekdul Serai and Ooreya, (correcting himself), I mean Ekdul Serai and Makimpoor, and afterwards between Khojahphulpoor and Ooreya. In the month of Phagoon, Gungadeen Bowryah of Bacongunge, and Muddra Bowryah and I, and Lullna Lodha and Moonooau Lodha, five of us, all inhabitants of Bacongunge, were released from prison; of these, Muddra, Moonooau and Lullna went away to the gang of Madar Lodha: Gungadeen Bowryah with myself remained at home. Towards the end of Cheyt, *i. e.*, three days before the close of the month, Collunder started with his gang westward. His gang consisted of myself and ten others, *viz.*, (1) Collunder, flour-seller, living in the European Regimental bazar, (2) Luchmun Thakoor, (3) Suntowa Aheer, (4) Merna Bowryah, (5) Subrattee Bheesty, (6) Gungadeen Kulwar, (7) Dunka Kulwar, (8) Prumsookh Kulwar, (9) Gungadeen Bowryah, (10) Mohna Chumar, and myself, all of Bacongunge,—eleven in all.

In seven or eight days we got into the Gwalior territories. We did not gamble in the Cawnpore district. But having crossed the Jumna into the Gwalior territories, we then commenced gambling, and continued doing so through the Gwalior territories as far as Dholpoor. Thence to Agra, we

ceased to gamble From Agra we proceeded to Coel, playing as we went From Coel we proceeded to Khoorjah At this place we remained ten or twelve days, stopping some times at one serai, sometimes at another, and every day we went on the high road and played

We remained gambling for three days near the guard houses and chowkees which are in the Khoorjah thannahda ree We paid the thannahdar of Khoorjah two rupees per diem this was shared amongst the thannahdar, mohurrir and jemadar In all, for sixteen days, we paid them two rupees per diem After that the thannahdar was changed, that is to say, he resigned and went away He was a Mahomedan, but I do not know his name His home was at Seharunpore Bowryah, which is three days' journey beyond Meerut As soon as he was gone, Collunder took us all to his brother Sheikh Chand s house in Meerut, we put up at the serai Collunder lived with his brother in the Euro pean Infantry bazar Collunder remained there, but the rest of us came back to Khurkhoudah which is six *coss* on this side of Meerut In six days Collunder joined us Before his arrival we had made arrangements with Doorgapershad Cashmeree, jemadar of Khurkhoudah We agreed to give him a rupee per diem, and at one of the Khurkhoudah Mur halahs were stationed two burkundazes, a lance jemadar and a sowar, we agreed to pay ten annas a day to the four the name of the Murhalah is "Kale Am And to one lance jemadar and two burkundazes at the Lallpore chow kee near Khurkhoudah we agreed to pay one rupee for three days The Khurkhoudah chowkee is between these two Murhalahs, and they are both subordinate to it We continued gambling twenty days within the jurisdiction of Khurkhoudah, stopping at night in the Khurkhoudah Serai and whatever was agreed for we paid daily

Leaving Khurkhoudah we came to Haupei in the Meerut division Our reason for leaving Khurkhoudah was this, that Doorgapershad jemadar was removed thence, and

relieved by another jemadar: with this one we could not come to an understanding. There are ten zemindars in Khurkhoudah; they also demanded some thing from us; then we left the place, and after remaining one night in the Hauper Serai we went on to Kailee, also in the Meerut district. There is a jemadar in Kailee; with him too, we came to no understanding.

We then left for Gullowtee, in the Boolundshuhur district. To Shurf Ali, the thannahdar of Gullowtee, we agreed also to pay three rupees a day for permission to gamble. The mohurrir and jemadar shared in this bribe. We remained four days gambling in their district, and paid them three rupees a day for that time. After four days he was removed; and Gopeenath Cashmeree came as thannahdar; with him we settled for five rupees a day: the whole thannah establishment, burkundazes and all, were to share in this payment. The thannahdar himself kept four rupees a day, and gave the other to the jemadar and the mohurrir. The burkundazes got nothing. On this, the latter being dissatisfied, threatened to apprehend us; then, Collunder paid the 24 burkundazes six rupees, which contented them.

After we had played at "Tasma-bazee" eight days in the jurisdiction of Gopeenath, the whole of Collunder's gang returned to Cawnpore. The reason was that when the gang of Madar Lodha came towards Boolundshuhur from Etawah, they fell in with Collunder's gang at Gullowtee.

Collunder's gang therefore returned to Cawnpore, and Madar's gang went on to Sirdhanah, which is in the Begum Sumroo's country. I don't know if it belongs to the Meerut or Boolundshuhur district. It was in last Sawan that Collunder and his gang got back to Cawnpore: they remained there Sawan and Bhadoon; after this, Collunder with his gang again proceeded westward towards Gullowtee in the Boolundshuhur district, *viz.*, (1) Collunder flour-seller, (2) Luchmun Thakoor of Baconguuge, (3) Suntowa Aheer, (4) Merna Lodha, (5) Nainsookhwa Bowryah, (6) Gungadeen

Bowryah,—all of Bacongunge, (7) Sirkeyah Kulwar, (8) Durgya Kulwar, both of Colonelgunge, (9) Prumsookh Kulwar, (10) Bhona Bowryah of Kalee Bhowanny, and Ka keerah Mussulman, these four latter men, after their arrival from Agra, had put up with Collunder and Gungadeen Te warree, of Sisamow these all left about the beginning of Kooar I did not accompany them

Subsequently Collunder sent a man with a letter to us, from which we learnt that Meer Khan, jemadar of the teh seel of Seeanuck, in Boolundshuhur, came with a party from the Magistrate of Boolundshuhur, surprised his gang, and apprehended them in a Kulwar s shop at Gullowtee, and Ma dar s gang were about the same time all brought prisoners from Ghazeenugger in Meerut the individuals of both gangs are now in prison in the Boolundshuhur jail Mutthru, a sepoy, came from Umballa, the gamblers requested him to report all well at their homes, and one man, who is an inhabitant of Bacongunge, also came from Meerut by him they sent word of their arrest and Lulleea, the wife of Collunder, sent a Lodha, a resident of Bacongunge, to bring intelligence from Boolundshuhur, and all the women whose husbands were in prison, agreed to pay him to go and fetch intelligence, whether they were released or not On his return he reported that they were imprisoned, their sentence had not been yet passed they call them ' Thugs there but all have confessed that they have alone been gambling with the Tusma

Q —How much have you gained by this gambling?

A —I have kept no account I got one or two rupees a day, in this way I got more or less at different times, whatever I saved, I sent home

Q —Who sent money home, and how much?

A —I do not know this The custom was that what ever we gained by gambling, we divided, and besides we played among ourselves at "Kaptain Whoever gained, gave his money to Sheikh Chand, the brother of Collunder,

who gave them hoondees on Kulloo, the son of Collunder. The wife of Collunder used to distribute the money amongst those to whom it was sent.

Q.—Were there any gamblers belonging to Madar's gang?

A.—There were many men; sometimes, they went with Madar, sometimes with Collunder:—(1) Nainsookh Lodha, inhabitant of Kheree mehal, (2) Bhona Lodha, inhabitant of Kalee Bhowanny, (3) Gungadeenwa Kulwar, inhabitant of Kapri mehal, (4) Suntowa Aheer, inhabitant of Purwa Mujan, (5) Thakoorwa Lodha, inhabitant of Baconguuge, (6) Gindya Aheer, inhabitant of the same place; all these men were detached in some other place, and when the rest were caught they escaped hither; Gindya, Nainsookh, and Bhona I met at Meerut in the month of Poos, when I went there for gambling purposes. I did not find Madar as I had expected, so remained by myself at Meerut. After the arrest of his gang, these three men fell in with me, and told me the state of the case, and I returned home in their company. I had quarrelled with Luchmun and with Collunder, therefore I did not accompany Collunder in Kooar, but went by myself to Meerut.

Q.—Did you gamble at Meerut or not?

A.—I was alone at Meerut, therefore I did not gamble. Suntowa in the middle of Aghun came from Gullowtee, and in Poos the rest of the party were apprehended. Thakoorwa Lodha and Gungadeenwa Kulwar came away one day before the arrest.

Q.—How often have you been in prison?

A.—Once I was imprisoned for six months, but released, in appeal, by the Judge; and once, with four others, I was imprisoned for six months for gambling, by the orders of the Deputy Magistrate.

Q.—How many times a year did you go on these expeditions?

A.—At no fixed periods: whenever we made an agreement with a thaunahdar we remained as long as this understanding lasted, and then returned home.

At home we remained two months, or a month at a time.

Dhownkul Aheer learnt to gamble with the strap from an European named "Creagh," of an European Regiment, and Ghunseya Lodha and also Sambhaloo, a cook, learnt from him; Suratoo, flour-seller, was taught by these three; then Junglee, and then many others, learnt.

R. MONTGOMERY,

Magistrate.

(LETTER NO. 137 OF 1848.)

From MAJOR J. GRAHAM, *Assistant General Superintendent, and Joint Magistrate, to* COLONEL W. H. SLEEMAN, *General Superintendent, Jhansie, dated Agra, the 29th July 1848.*

SIR,

I have the honor to acknowledge your No. 122 of the 17th ultimo, with copy of letter, dated 14th idem, from Secretary to Government, N. W. P., and enclosures for my perusal, and conformably with your directions, now furnish, for submission to that Government, a report of the result of my enquiries into the practices of the association of offenders calling themselves Tusma-bazees; their origin having been previously given, and as far as I can learn, most correctly, by Mr. Montgomery, Magistrate of Cawnpore.

2. This result will prove that they are Thugs, and that they use their art from which they take their designation, chiefly, if not solely, to enable them to carry on Thuggee with greater impunity.

3. Mr. Plowden, the Magistrate of Boolundshuhur, in a proceeding, dated 30th December last, addressed to me, stated that he had accidentally heard rumours of 20 or 25 persons, budmashes, and suspected Thugs, who under pretence of playing Tusma, (a sort of gambling) with travellers on the public roads of Gullowtee, Hauper, Khoor-

jah, &c., had been residing in the serai of Gullowtee for some months, with the connivance of the thannahdar and thannah establishment of that place, who received compensation for the same; and that on receipt of the information, he had deputed the tehseeldar of Khoorjah and kotwal of Bolundshuhur to the spot, for their apprehension; and that 14 men, with Rs. 85 cash, and sundry parcels of paper (containing medicinal drugs) on their persons, were taken: that one of the persons seized, Gungadeen, had deposed before him, that the gang consisted of 17 persons, who were residing in the serai at Gullowtee with the connivance of the thannahdar of that place, to whom they paid a certain sum every evening, through Hursoi Singh and another burkundaz; that they played with the Tusma with travellers, on the highways, nobody interfering with them; that the depositions of others of the offenders corroborated Gungadeen's statement; that he, the Magistrate, was of opinion, they belonged to the Thug fraternity; using the pretence of Tusma-bazee, and fixing their abode at Gullowtee, for the purpose of committing other crimes, and administering poison to travellers; that lately, while he was absent in the hills, a headless corpse was found near Lodha on the side of the public road, which murder he thought it very probable had been perpetrated by them: that Gungadeen also deposed to there being several gangs of the same description of people, who at first, for a time, had sojourned in the serai at Khoorjah, but were now in the serai at Ghazeeabad, pergunnah Dosnah, zillah Meerut: but one of the 14 was consequently dispatched as an informer with a party to arrest them; that according to Gungadeen's evidence, it appeared that these people were not unknown to the Thuggee department. He, therefore, called upon me to depute goindahs acquainted with the Allahabad, Cawnpore, Allygurh and Meerut districts to recognize them.

4. On the receipt of the above, I directed my duffadars, Thakoor Singh and Durryah Khan, who are moving up

towards Umballah with approvers &c, to place themselves for a time under the orders of Mr Plowden, and examine this class of people, and immediately dispatched other approvers from Agra of the poisoner class, with a man named Chota, who had just been arrested in a case of murder, whom I suspected to be one of the gang, this person on his arrival at Boolundshuhur, recognized out of the party *Khyroollah, Dullye, Brij Lall, Jungla,* and *Theekah,* and stated that ten months previously, in the month of Bysack, he had gone to Ferozepore, and on his return thence towards Kurnaul, on the east of that place, where there is a well and a Dhâk jungle, he fell in with these men while in the act of sharing some spoil, and that Brij Lall on seeing him covered it over with a cloth, when he, Chota, told them, that he was one of their craft, upon which he received from Khyroollah a wooden dibbeeah with looking glass, from Dullye, two bags of black cloth, and from Brij Lall a chintz cap and that they told him to leave them as they were pursued, having just murdered three men, grass cutters, in the jungle, near Kurnaul, and that he came on to Dehlee, and they went into the jungle

5 My goindahs, Hookum Baldee, and Oree, recognized Gungadeen, Dabee, Katchee and 11 of the gang, and said that they met them when proceeding on duty to the eastward from Agra, at a place two *coss* on the east side of kusba Akdil, zillah Etawah, that they were quarrelling about their shares in some booty, and that Gungadeen was crying out and threatening that he would betray them if he did not get his portion and that the officer of the guard took them all to a baolee near at hand for examination but as they were unknown to the approvers they were released

6 Upon communicating this to the Magistrate of Boolundshuhur, he sent to my Court 19 Tasma bazees, and I instituted enquiries regarding them from the Courts of Boolundshuhur and Cawnpore I ascertained by volunt

nous misls that they were notorious budmashes, and had been implicated in many misdemeanours; had frequently been punished as vagabonds, and had been in gangs traversing the country under pretence of Tusma-bazee, with the connivance of the police, wherever they could effect their purpose, and paying whatever was demanded of them for the privilege.

7. The Magistrates of Boolundshuhur and Cawnpore, subsequently sent to me others of this class, making in all 57, for the purpose of my ascertaining whether they had been guilty of criminal offences, and, if so, to bring them to trial. Of these, eight were returned for want of evidence.

8. From the correspondence with the officials above-named and the evidence of my approvers, &c., I obtained proof of their having formed themselves into gangs for the purpose of robbing travellers on the public roads; and from Chota, poisoner, a participator in the spoil of a murder, the production and recognition of part of the property, and the confession of several, it was equally manifest that they had added murder to their other crimes, as will appear from the following circumstances, acknowledged by several of them, and corroborated by much collateral and positive evidence.

9. Brij Lall deposed before me, that he had been concerned in the murder of three men, grass-cutters, near Kurnaul, as stated by Chota, poisoner; and named Dullye, Jungla, Khyroollah and Buldewa (then at large) as his accomplices. Dullye and Jungla admitted the fact; Khyroollah alone denied; Chota denounced them in my presence; the articles which were given to him, and which were obtained from the Dehlee Court, where he was arrested on his arrival there, were produced, each one recognized and acknowledged by the parties respectively as those given to Chota as part of the spoil above-mentioned. This case was also tested by correspondence, and misls received

from the Court. Orders were issued for the apprehension of Buldewa, the accomplice at large. He was also arrested, and, on his arrival, corroborated in some measure the confession of the others. The proceedings in this case are complete, and it will be committed immediately to the Sessions Judge.

10. After this, Brij Lall deposed to his having murdered Boodur, a chumar, resident of the Sudder Bazar, Meerut, by administering poison to him in sugar; and implicated in the case Coltunder, (the chief of the Tusma-bazees,) Soobrattee, Peekah, Buldewa, Ghasee Singh, Sawai Singh, (brahmin,) Girdaree, Bhimma, and Gunnesee, (sirdar bearer,) adding that the poison was procured from Cheddee, punsaree.

11. The case was closely investigated by me, and I arrested all the offenders, with the exception of Gunnesee, sirdar bearer, still at large. Eight men confessed the charge imputed to them, and the case was tried by the Sessions Judge of Agra on the 26th and 27th instant, and with the exception of two who were admitted Queen's evidence all were convicted and made over to the Court of Sudder Nizamut Adawlut for sentence.

12. In addition to these two cases, Brij Lall also states the occurrence of another case, three *coss* from Kussoor, in the Lahore territory, by the administering of intoxicating drugs; and denounced Dullye and Jungla as his accomplices, and as being concerned in also the murder of a pensioned jemadar at Meerut.

13. Lalla, a Tusma-baz, poisoner, confesses to the three murders, 1st, at Mohoba, zillah Etawah; 2nd, Mougha Thillee, zillah Futtehpore Huswa; 3rd, at Gullowtee, zillah Boolundshuhur.

14. Ghasee, Fakeerah, and Gungadeen deposed to the murder of two travellers near Gullowtee, whose bodies were thrown into a ditch at Sirras chowkee, with the knowledge of the burkundaz stationed there.

15. All the Tusma-bazees are implicated in the above cases, directly or indirectly, and eight cases of Thuggee have come to light by their confessions, one of which has been brought to conviction; one is ready for trial; and the rest will follow as time and opportunity admit.

16. Mr. Montgomery has given a succinct history of the origin of Tusma-bazee, and the habits of these people as gamblers and loose characters; and the result of my investigation has shewn that, however their practices may have been confined to that art at first, they have for a long time used the denomination merely as a cloak for darker deeds, knowing that there is no regulation of Government by which greater punishment than that assigned to budmashes could reach them while their atrocities remained undiscovered, and they were considered as Tusma-bazees *only*. Their art and their vagrant habits gave them peculiar facilities for selecting their victims; they appeal to have well chosen their positions on the Grand Trunk Road, and must have seen all travellers passing along; their game attracted attention and proved an excellent snare to catch the unwary; the impunity given by the police made them less suspected; from those seduced to play they were able to ascertain who had any thing to lose, and what they failed to obtain by their art, they appear to have got by the administering Dhutoorah, and by more violent means when necessary.

17. They do not appear to have admitted any into their fraternity who were unacquainted with the art.

18. The sums of money they were able to collect by this villainy were enormous, as is shewn by Mr. Montgomery's statement, and the articles ascertained by him to have been sent to Cawnpore by Collunder and his wife, and brother Chand Khan, (who appear to have been the treasurers and distributors of their gains), are of a nature to shew that they could not have been honestly obtained by persons in their condition of life,—such as pearls, corals, &c.

19 Mr Plowden intercepted a letter addressed by Bhowaneedeen to Luchmun, Tusma baz, the contents as follows "viz, the articles sent by Mohee Lall have duly reached —

Silver Bangles,	Rs 18
Pearls,	„ 60
1 Gharrah,	
1 Lungnoo,	
1 Arsee,	
1 Gunga Jullee,	
1 Ungurkha,	
Cash,	„ 15
Corals,	„ 4
2 Caps,	
1 Gold Mohur,	„ 18
2 Pots,	
1 Dobree,	
Cash,	„ 10

20 This communication was sent to Mr Montgomery for the production of the articles and investigation of its meaning, and they were found with few exceptions in Luchmun's house Collunder, in a very short space of time, remitted to his family hoondees amounting to Rs 700, through his brother Chand Khan, who held the situation of 2nd khansamah to one of the Queen's Regiments, and Mussumat Lallia, the wife of Collunder, realized the amount, which she distributed in shares to the families of the rest of the gang, Collunder, as chief, receiving a double share

21 It is a remarkable fact that, up to the time of the apprehension of these people, cases of Dhutoorah and reports of bodies found in the vicinity of the Trunk Road were numerous and defying all proof It is not long since the Commissioner of Agra reported that they were greatly on the increase, but since their apprehension not more than two cases have been heard of

22. In the course of my long experience, I have never met with so debased and hardened a set of offenders. They do not pretend to any religious motives, and have none of the restraints or observances of the old Thug fraternity; but have sallied forth under a false guise, resolved on getting money in any and every way, nothing loath to destroy life to effect that purpose; and I have not a doubt in my own mind that they have been the perpetrators of almost all the crimes which have abounded on the highways in the Dooab for some years, and that many more of their deeds will be developed, now that I have been successful in bringing a case to conviction.

23. A very serious feature in this investigation is the collusion of the police with these people. Press of business has hitherto prevented my taking evidence and searching closely into the cases enumerated of their being bribed, but the fact is placed beyond doubt with regard to these at Khoorjah, Khurkhoudah, Kullarun, Lallpoor, and Gullowtee; and they have on occasions received as high a rate as Rs. 5 per diem, and at the latter place, when the Tusma-bazees were once arrested, they got free by a payment of Rs. 24, given to them by Collunder. The Magistrate of Boolundshuhur has committed some of the police and got them convicted by the Sessions Judge of Meerut.

24. Had the police not winked at their proceedings, it would have been impossible for these people to have carried on their depredations for so long a time.

25. Herewith I transmit copies of 16 depositions made by these people in my presence.

I have, &c.,
J. GRAHAM,
Asstt. Genl. Supdt. & Jt. Magte.

Agra, July 29, 1848.



No 4.

REPORTS OF THE "OOTHAEEGEERAHS OR THE SUNOREAHS OF THE TEHREE, DUTTEEAH, SHAHGURH, AND CHUNDEYREE, OR BANPOOR STATES

No I—Letter *No 11 of 1851, dated Camp Khutoora, the 7th February 1851, from* G A Bushby, Esq, C S, *Agent Governor General for Scindia's Dominions, to the Secretary to the Government of India, with the Governor General*

Sir,

I am not aware that the practices of the "Oothaeegeerahs," or Sunoreahs, of the Tehree, Dutteeah, Shahgurh, and Chundeyree, or Banpoor States, have been before brought to the notice of the Government of India, or to the Governments of the subordinate Presidencies I therefore submit the copy of a Report, from Major Harris, Superintendent of Chundeyree, dated the 31st January, containing information respecting the proceedings of the abovenamed people, which the Most Noble the Governor General may deem deserving of distribution to the Magistrates, and communities of India, for the purpose of putting them properly on their guard against the arts performed by Sunoreah professional thieves, for the purpose of obtaining other persons' goods

2 The Bundlecund States implicated herein (with exception of Chundeyree,—which is a part of the Territory assigned by Scindia for the expenses of the Contingent under the Treaty of 1844, at present under the management of the Superintendent Major Harris) exercise an independent rule within their own limits Banpoor is a small State, now representing the Raj of Chundeyree, which was spoiled by Scindia We obtained from Scindia a restitution to the Banpoor Raja of one third of Scindia's usurpations, and the other two thirds, which he retained, were eventually ceded to us by the Treaty just mentioned

3. The connection of the Government of these States with professional thieves and vagabonds, is an apt commentary on the morals of the Boondela Princes and Principalities. They are the offspring of plunderers, and had never known Civil laws, or national obligations and restraints, till their relations with the British power brought them into contact with the European system of civilization and manners.

4. How navely do the State of Tehree and the Raja of Banpoor, confess themselves to be the confederates of thieves!

5. I transmit also a copy of Major Harris's letter to me, dated the 30th January, and English enclosures, in the case of the 14 Sunoreahs, who robbed the Calcutta shopkeeper in February last year of 3,000 Rupees worth of property; all of whom (except No. 14, the approver to whom the Superintendent promised pardon), I have sentenced to an imprisonment in the Lullutpoor Jail for seven years with hard labor, as will appear from the copy of my reply also transmitted.

Act XI 1848.

6. I take the liberty of recommending that the States who are known to harbour professional thieves, have a severe lecture read to them; and that Tehree and Banpoor on this occasion be fined,—the former in the sum of 5,000 Rupees, and the latter in the sum of 1,000 Rupees, for the reparation of the injury done to the British subjects who suffered from the exploits of their Sunoreah subjects in February last at Calcutta, and to meet the cost of dieting and detaining the 13 convicts in prison for seven years.

I have, &c.,
G. A. BUSHBY,
Agent Governor General.

GWALIOR AGENT'S OFFICE,
CAMP KHUTOORA:
The 7th February 1851.

No II —LETTER *from* MAJOR HARRIS, *dated 31st January 1851*

SIR,—I have the honor to report, that when investigating lately a case of extensive robbery committed in Calcutta by the notorious Sunoreahs, or Oothaeegeerahs of this part of the country, circumstances were revealed that convinced me that the organized system under which these people carried on their calling to the remotest parts of Hindoostan, was unknown to our Government Officers

2 They have hitherto, I believe, been considered in the light of travelling shoplifters, who, when detected on a summary enquiry, received ten or a dozen ratans, and were let loose to carry on their profitable calling with almost impunity

3 I have submitted to you in the accompanying roobucaree, a full and particular account of these people, derived from the evidence of their chiefs, taken on oath in my presence, and attested by two respectable witnesses, which I think may prove interesting, as well as a useful check on these people, if made known to all Magisterial Officers throughout India

4 During the investigation of the Calcutta robbery, before referred to, the following villages were named, as being especially Sunoreah villages, and known throughout India amongst the Sunoreahs as "the 12 villages —Baragaon

1	Churpoora,	Tehree	7	Muroura,	Shahgurh
2	Hurpoora,		8	Banpoor,	Banpoor
3	Munowra,		9	Beer,	
4	Jumrar,		10	Oodair,	
5	Tendaree,		11	Rora,	Dutteeah,—
6	Kurmaree,		12	Purhree,	

all inhabited chiefly by Sunoreahs, buneeahs, chumars, and mehturs, being the only castes who are excluded from the brotherhood

5 The same rules are observed by the Sunoreahs of all these villages, though the present enquiries have not embraced those of the Dutteeah State

6. Ghareeba Sunoreah, resident of Hurpoora, in the Tehree district, whose family for seven generations had been Sunoreahs, offered to give me information of several extensive robberies that had been committed within the last two years by these people in the most distant parts of India, *viz.* ;—

No.		
1.	Panwell near Bombay, ...	A Watch.
2.	Dooleah in Kandeish, ...	Rs. 1,700.
3.	Ahmedabad in do., ...	
4.	Garuspoor, ...	Rs. 1,656.
5.	Bombay, ...	A Watch.
6.	Nagpoor, ...	
7.	Jubbulpoor, ...	Rs. 875.
8.	Nasuck, ...	
9.	Jubbulpoor, ...	Rs. 686.
10.	Dooleah in Kandeish, ...	Rs. 700.
11.	Patna, ...	Rs. 509.

and produced "dussees" or clues to them.

7. Finding that one of the elders in high estimation of the brotherhood, had betrayed the secrets of the craft; I received a deputation from the heads of the "Baragaon," stating that they would answer faithfully any enquiries I wished to make.

8. They distinctly affirmed on oath, that their pursuits were well known to their own Governments, that the lumberdar of the village on the part of the Government is the appointed mookeea or chief of the Sunoreahs of his own village.

9. Each village has from seven to ten "nals" or gangs registered by their Government; Lala Kishore, canoongoe, being the official at Tehree who keeps the Sunoreah duftur. The Sunoreahs number upwards of 4,000 in Tehree, about 300 in Bánpoor, and about 300 in Dutteeah.

10. That Ladlee Koorea is the appointed mokuddum, or head mookeea, on the part of the Tehree Government,

over the twelve villages; whose duty it is, to arrange all disputes amongst the Sunoreahs arising from unfair division of spoils, and to receive from the Sunoreahs, on their return from distant expeditions, articles of "vertu" or value, worthy of being appropriated by their Government.

11. The mookeeas state, that immediately after the Dusserah, every year, the gangs of the several villages depute their mookeeas to consult their favorite brahmin priest, (who resides at Lahur in Chundeyree) as to the propitious signs to be observed by them. After due time he informs the applicant that his luck will be towards the south, and such an hour and day is propitious to start.

12. This is communicated to his own gang, and an invitation given to all stragglers who do not belong to any particular village, or gang, to join in the distant excursion. At the time named, they all meet at an appointed well, or tope, and start (for instance) for Jubbulpoor,—the south having been the propitious point of the compass indicated.

13. Arrived at Jubbulpoor, (the gang consisting of fifty or sixty men,) the mookeeas tell them off into parties of ten or twelve, appointing a sub-mookeea, to take charge of them and give an account hereafter of their earnings; merely expending what is necessary for their actual subsistence:—these parties being detached severally to Nagpore, Hyderabad, Indore, &c., the head mookeea of the "nal" retaining a strong party with himself at Jubbulpoor, to carry on operations in that large city till the return of the detached parties, who are enjoined to return, whatever may be their success, in the following July to Jubbulpoor, to render an account of their proceedings.

14. Should the amount be equal to forty or fifty rupees to each individual, they return at once to their homes, in time to cultivate the land for the summer crops. If the amount to be divided does not equal their expectations, the parties are again detached for plundering [illegible]

by the head mookea, who returns himself with the several shares, and distributes them to the families of his party.

15. Should there be any valuable, worthy of being presented to the Government, the mookeea of the gang, accompanied by the lumberdar or mookeea of the village, proceeds to Ladlee Koreah, the head mookeea of the twelve villages, who, with the mookeea of the village in question, proceeds to Tehree to deliver up the *huqq* of the Sirkar.

16. It was stated by all the mookeeas in the course of this enquiry, that their office was *hereditary* in their families. When failing male issue, descending to the women: as was disclosed in case No. 1 noted above, wherein Nunhee Mehtun, a woman, was the mookeea, and she deposed that she received the watch from her nal, and delivered it to the Raja of Banpoor.

17. In the Kandeish (Bombay Presidency), cases Nos. 2 and 10 of the list before mentioned, it was proved that two very handsome and valuable pearl nose-ornaments were presented by the gang through Ladlee Koreah, to the Tehree Government, for which the thief received from the Government fifteen beegahs of land as a rent-free grant, in perpetuity; on the occasion of this robbery, the property stolen was estimated at Rs. 2,500, which I have traced. Such aggressions upon our subjects cannot be called trifling, or petty thefts.

18. In the Patna case, amounting to 509 Rupees, it was proved, that a handsome pair of arm ornaments valued at 100 rupees, reached the Raja of Banpoor: also, in each of the Bombay cases, a watch reached the Raja of Banpoor: these robberies having been committed by Sunoreahs of Beer in the state of Banpoor.

19. The Governments of the Tehree and Banpoor States being known to tolerate and reward these people, they dispose of their spoils in open day, in the market places, and *bazars* of these States, to seths, sonars and

buneeahs, who are all well acquainted with the calling of these people, and afford them a ready opportunity of selling gold, and other valuables at half their value, and thus an encouragement is afforded them to pursue their thieving avocations

20 During their absence for one or two years on a distant excursion, the village money lender feeds the Sunoreah s wife, and family, and takes broken gold, or gold mohurs, (stolen property) at little more than half their value in payment of the account run up in his absence

21 Deoree Singhaee, of Tehree, is proved to have bought openly a bar of gold, part of the Kandeish robbery, seventy nine tolahs of the finest metal at Rs 16 6, (the market price for the same kind being 21 rupees per tolah,) knowing that such a valuable could not have been obtained by fair means, and he acknowledges to the same The owner was a banker travelling from Bombay westward, and cannot be discovered, yet as the robbery was committed in our territory, as confessed to, our Government has a claim to the proceeds as "lawarisee The exacting such, as a fine, would be the greatest check possible to the Sunoreahs finding ready purchasers for their stolen spoils

22 Finding by the sworn testimony of all the mookeeas, that the States of Tehree and Banpoor openly received all articles of value obtained by the robberies of the Sunoreahs who resided in their several villages, I invited both these States to communicate what was their practice relating to them Copies of the Khureetahs from both States are attached to these proceedings, in which the facts deposed to, are admitted, and the plea advanced by both States, for tolerating such practices, is the circumstance that no Government, British or Native, had ever forbidden them

23 It is necessary to remark, that these people never practise their calling in the States where they are tolerated and recognized

24. One of the most important points elicited by the investigation is, that they have a slang or "bolee" of their own, well known to the brotherhood throughout India, their children being instructed in it from early youth. I have attached to the proceedings a list of several words chiefly in use with them, obtained from the mookeeas while under examination; admitted by several with great reluctance, who indignantly asserted that, had not Ghareeba (my informer) faithlessly betrayed the craft, they would have allowed their flesh to be torn from their bones, rather than have disclosed a word; that as often as they had been apprehended on suspicion, or been detected with stolen property on them, such a disclosure of their system and bolee, had never been made, but now their calling or occupation would be gone.

25. They have their "chounees" or head quarters in the several parts of India they resort to.

26. For Calcutta, the Suraee of the Raja of Burdwan is their chounee; where there are never less than 200 Sunoreahs practising their calling on the unwary travellers who partake of the hospitality of the Raja; the Sunoreahs themselves receiving daily, with the travellers assembled, their food from the bounty of the Raja. From this depôt the "nals" or gangs in Calcutta are reinforced, returning to this favorite resort to account for or divide the spoils accumulated in Calcutta. "They state that the "alms or food is daily distributed morning and evening by "the mahunt of the byragees at Burdwan, whose resi"dence is on the banks of the Ganges; on which account "numerous Sunoreahs are to be found daily attendant at "the mahunts. The Sunoreahs, while at Burdwan, fix "their resting place at a ghât on the Ganges, that has an "almond tree shading it, and they always represent them"selves as proceeding to Teerut. When the travellers at "that ghât acknowledge themselves to be from Oorcha or "Tehree, Chundeyree, Dutteeah, Shahgurh, Chatterpoor,

"Chitterkote, &c., &c., in Bundlecund, it may safely be "concluded they are Sunoreahs."

27. To the south of Lal Gola, eight koss north of Moorshedabad, where the high road to the north-west branches off, there is a tank, south of which in a garden belonging to a Baboo who daily distributes alms to travellers, the Sunoreahs have established a chounee here, from which they carry on their depredations at the fair of Megh Murd, held at Deenatpoor in Rungpoor; returning with their spoils to deposit with their friends the gwallas and buneeahs of Lal Gola, who well know the Sunoreahs. At the end of their season in June, they dispose of all their spoils of the surrounding neighbourhood to their friends of Lal Gola, turn the proceeds into gold, and return to their homes in July.

28. In the city of Rajmehal, the Tehree Sunoreahs have formed an extensive "chounee," at a mohulla known by the name of "Tewarey purdasee's" mohulla, and though he and the family have resided at Rajmehal for three or four generations, his ancestors were of the Oorcha or Tehree States. On this account the Sunoreahs of Tehree, being considered to be fellow-countrymen, he permits them to occupy houses in his "mohulla," knowing well their calling, and the mookeeas state that not only does Tewarey himself purchase all their spoils, but there is not a resident in the mohulla, be he buneeah or be he Mussalman, that does not purchase from them! A nest of receivers of stolen goods!

29. For the south, Gopalpoor ghât, near Jubbulpoor, is the chounee or depôt.

30. For Bombay and Goojrat, the village of Nuriyard, three koss north of Ahmedabad in Goojrat, is the chounee· the lumberdar of this village receiving a portion of the spoils of each gang, to secure his good will.

31. Having related all that occurs to me to be necessary, beyond what is set forth in the Persian roobucaree,

I beg to suggest that the States of Banpoor, Tehree, and Dutteeah, have it in their power to break up this organized system of robbery practised on British subjects throughout India by their subjects, with their knowledge and approval; a system that is governed by the rules of discipline, from the Government servant who keeps the register of these people, through the several grades of mookeeas, to the single Sunoreah, who owns to no village or particular gang. The States of Tehree and Banpoor have solicited the orders of our Government for the future, for their suppression.

32. When communicating with the Magistrate of Patna relating to the cases in the list, he expressed a wish that I would furnish him with all the particulars I could of the manners and habits of these people. I would beg to suggest, with deference, that an outline with a list of their "bolee" or acknowledged slang, hitherto quite unknown but to themselves, might be published for the general information of Magistrates and Police Officers. This knowledge might be a great check to the gangs of those people who at this time are spread over India pursuing their robberies.

33. Ghareeba, the Sunoreah who was my informer, and disclosed the whole of the system, will be no longer tolerated in Tehree, either by the Government or his fellow Sunoreahs. I would beg therefore to recommend, that one of the old and ruined villages that have nothing left but the name, and of which there are many in the Mahrownee district, may be given to him for a term, on a nominal rent, where he may settle with his family and followers, and take to the plough for the future.

I have, &c.,
P. HARRIS, Major,
Superintendent, Chundeyree.

Lullutpoor:
The 31st January 1851.

Translation of Khureetah, from the Raja of Banpoor, dated 22nd November 1850.

After compliments, states, "your Khureetah has been received, mentioning that from the evidence of several Sunoreahs, a watch stolen by the Oothaeegeerahs has been presented to me through Khyramut Khan, Ram Pershaud, and Hindooput chowdry, and that Nunheo Mehtun confirms the same. You have enquired the circumstances from me, I have to state that, from former times, these people, following their profession, have resided in my territory and in the States of other native Princes; and they have always followed this calling, but no former Kings or Princes or Authority, have ever forbidden the practice; therefore these people for generations have resided in my territory and the States of other Princes; proceeding to distant districts, to follow their occupation, robbing by day for a livelihood for themselves and famlies, both cash and any other property they could lay hands on. In consequence of these people stealing by day only, and that they do not take life, or distress any person by personal ill-usage, and that they do not break into houses, by digging walls or breaking door-locks, but simply by their smartness manage to abstract property; owing to such trifling thefts, I looked on their proceedings as petty thefts, and have not interfered with them. As many States as there may be in India, under the protection of the British Government, there is not one in which these people are not to be found, and it is possible that in all other States who protect them, that the same system is pursued towards them as in my district; and besides, these people thieving only by day, the Police Officers in the British Territories are not expected to exert themselves, the loss having occurred simply through the owner's negligence. Owing to this circumstance, your friend looking on their transgressions as trifling, I have not caused my Police to interfere with them.

The British Government who issue orders to all the native powers in India, have never directed the system of Sunoreahs to be stopped. From this I conclude that their offence is looked upon by the British Government as trifling; and probably this is the reason, that neither the British Government, nor any other authority, have ever directed me to stop their calling; and on this account, from property that they have brought home, and I have heard that it suited me, or that they themselves, considering the article to be a curiosity from a distant province, have presented to me through my servants, thus viewing the offence as trifling that there was no owner to the property, I received it from them, and gave them a trifle in return.

There is nothing strange in buying an article for less than its value. People make up articles at a great cost, and sell them when they require cash at much less than their value. In this way the buneeahs in open bazar throughout the native States, buy from the Sunoreahs; but since the case of the Sunoreahs has been taken up by you, and you have diligently enquired into the system of Oothaeegeeree, summoning several of these people from Teekumgurh, &c., and feeling that my territory is under your charge, and that you are 'my friend, I was about to consult you for advice relating to these people, when your letter reached enquiring their practices and encouraging me in a friendly way to write the truth. With feelings of friendship, I have written the whole of the system to you, and I now seek your advice what to do. I shall not decide on any thing, till advised by you in this matter, and as appears best to you, relating to these people. Do me the favor to communicate your directions, and hereafter there shall not be the slightest deviation from your instructions, always conforming strictly to your orders, &c., &c.

MAJOR HARRIS also furnishes a translation of a Khureetah from the Dowager Queen, or Ranee of Teekumgurh, in reply to his Khureetah, on the subject of the Sunoreahs throughout the Tehree district The Khureetah from Tehree, he observes, corresponds word for word with the above from Banpoor, with simply the following addition

"Occasionally the owner, searching for his property from other districts, has complained Immediately his property has been restored to him, and the thieves have been punished"

Specimen of the "Boled" or Slang Language used by the class of professional Thieves in Bundlecund called Sunoreahs, or Oothaeegeerahs

ENGLISH	SUNOREAH'S LANGUAGE
Grain seller,	Surroon
A Bag,	Rontra
Havresack,	Suttoo,a
Box,	Pinjuree,a
Shawls and valuable cloths,	Santa
Broad Cloth,	Roongee
Shoes	Gonnee,a
Brass Pot,	Pynee
Brass Plate,	Thunkee
Brass Vessel,	*Kholah*
Flannel,	Ringultee,a
Sword,	Dharraree
Gun,	*Bhurkaaree*
Dagger or 2 bladed knife,	*Kappoo,a.*
Nose Ring,	*Naklee*
Pearls,	*Nugree,a*
Coral,	*Hurkee,a.*
Turban,	*Agassee*
Europeans,	*Topee,a*
Police Officers,	*T,hola*
Policeman,	*Kappooree a*
A Pipe (Hookka),	*Latpalta*
Soldiers,	*Oongar*
Waist Cloth,	*Lanfalty*
Cash in Silver,	*Dlorre*
Gold Mohurs,	*Ne*

English.	Sunoreah's Language.
Copper Cash, ...	Dharro.
Silver, ...	Oobbun.
Gold, ...	Seeand.
Diamond, ...	Kukura.
Jewels, ...	Oothar.
Silversmith, ...	Kue, yar..
Cloth Merchant, ...	Khujjar.
Banker, ...	Tulleeah.
River, ...	Teeree.
A Fair, ...	Beeuh.
Net for carrying rupees tied round the waist (Himmiyane), ...	Bigoree.
Village, ...	Bang.
City, ...	Burra Bang.
Horse, ...	Furka.
Camel, ...	Lumgeech.
Elephant, ...	Sonree,a.
Mahomedan,...	Koongee,a.
Brahmin, ...	Khoosur.
Kutcherry Officials,... ...	Muska.
Gang of Sunoreahs, ...	Naal.
Eat your bread quickly, ...	Tapee nikallo.
To be seized or apprehended,	Tig-guya.
When apprehensive of detection, ...	Bheer ayee moondeea boora, dekhlata hue.
Run, make off, ...	Lud jao.

Pirrooa, a boy about ten years of age, I examined myself on the above list, and he confirmed every word; as also Joga his brother, seven years of age, having been instructed from early youth.

P. HARRIS, Major,

Superintendent, Chundeyree.

No. 5.

REPORT ON THE BOUREEAH GANG OF ROBBERS, &c.

I.—*From* H. H. GREATHED, ESQ., *Commissioner of the 1st or Meerut Division*, to W. MUIR, ESQ., *Secretary to the Government, North Western Provinces, Agra; No. 98 of 1855, dated the 6th August 1855.*

IN connection with your letter No. 431 A, of the 8th February last, I have the honor to submit the accompanying correspondence with the Magistrate of Moozuffurnuggur, relative to the gang of Boureeahs in his district, discovered to be in the habit of thieving along the Grand Trunk Road, and to offer some observations on the measures proposed for the reclamation of such predatory tribes.

2. It is shown that the gang consists of above 1,300 persons, who were born and brought up as thieves, and will continue so to their deaths, unless forced into honest courses. The number absent in January indicates the proportion actively employed in the vocation of the gang. The result of the August census proves that the majority of the band have withdrawn from the Moozuffurnuggur district under the pressure of the enquiry. It is a step in advance to have broken up so completely the nefarious combination that has so long existed between the zemindars, the police, and the thieves; but no lasting remedy has been applied, for the members of the scattered gang must still be thieving, though not with the same confidence and comfort as heretofore.

CENSUS IN JANUARY.

	Males.	*Females.*	*Boys.*	*Girls.*
Present, ..	7	393	196	219
Absent, ...	387	51	25	18
	CENSUS IN AUGUST.			
Present, ..	0	132	0	0

3. The existence of Boureeahs had been known to the Magisterial authorities, and a just suspicion was entertained of their habits, but as they did not steal in the

district, and were protected by the zemindars, there was no knowledge of their pursuits. An accident has revealed the extent of the injury this band inflicted on society, and I think the investigation should not terminate in Moozuffurnuggur, or be restricted to one class of hereditary thieves. It is essential that the real extent of the evil should be laid bare, and that the haunts and habits of every predatory tribe should be made familiar to the Magistrates. It is suggested that the prosecution of these discoveries should be confided to one officer armed with general powers; but I consider that it would be more rapidly and more effectually carried out by the ordinary District Agency set in motion in a systematic manner.

4. With the aid of the information thus elicited, remedial measures will be proposed with more confidence, and tested with more ease: some are suggested in the correspondence, but I cannot support any which are dependent on extrinsic aid, and I am consequently opposed to the experiment of establishing reformatory agricultural colonies, work-shops, or manufactories. I trust to the effects of self-reformation, induced by a conviction that freedom from molestation is only to be secured by the adoption of honest habits.

5. The Legislature has armed Magistrates with the powers to instil such a conviction, and the enactments which confer this authority are especially directed against the tribes with whom we have to deal. Section 10, Regulation XXII, 1793; Section 10, Regulation XVII, 1795, and Section 10, Regulation XXXV, 1803, successively enacted for Bengal, Benares, and the Upper Provinces, declare that all vagrants or suspected persons without any ostensible means of subsistence, or who cannot give a satisfactory account of themselves, shall be apprehended and employed on public works, until they find security for good behaviour, or satisfy the Magistrate that they will obtain an honest livelihood.

6. The general application of this law throughout the provinces will set before the predatory tribes the option of undergoing an indefinite course of molestation, or of seeking to merit immunity by the adoption of new habits; and I am sanguine that if the law is steadily enforced, and the only security against its provisions is found, throughout the breadth and length of the land, to lie in submitting to a settled life, that the number of instances in which the law has to be applied will rapidly diminish. The operation would be expedited by persuading landed proprietors that they incur no risk in giving honest employment to vagrants seeking a livelihood, and further progress might be made in raising the tribes in their own estimation by facilitating the education of their children.

II.—*From* H. H. Greathed, Esq., *Officiating Commissioner of the Meerut Division, to* J. A. Craigie, Esq, *Magistrate of Moozuffurnuggur; No. 11 of 1855, dated the 17th February 1855.*

I have the honor to transmit for your information a copy of a letter from the Commissioner of the Allahabad Division, to the Secretary to Government, noted below, on the subject of the arrest in Zillah Cawnpore of some thieves, who are supposed to form a part of a gang, who have their head-quarters at Tibrah and other villages in your district.

2. As I am aware that you have been in communication with the Magistrate of Cawnpore on the subject, I do not deem it necessary to send copies of the abstract translations of the depositions of the parties named in the margin,* that accompany Mr. Lowther's letter.

* Nusseeba, son of Goonna, caste Boureeah, inhabitant of Jubra, aged 28 years.
Golab, son of Muttra, caste Rajpoot, *alias* Boureeah, inhabitant of Berar Kherah, aged 80 years
Dhun Singh, son of Mukhtarun, caste Rajpoot, *alias* Boareeah, inhabitant of Tibrah, aged about 60 years
Bhoondlah, son of Munohura, caste Thakoor, *alias* Boureeah, inhabitant of Tibrah, aged 20 years.

district, and were protected by the zemindars, there was no knowledge of their pursuits. An accident has revealed the extent of the injury this band inflicted on society, and I think the investigation should not terminate in Moozuffurnuggur, or be restricted to one class of hereditary thieves. It is essential that the real extent of the evil should be laid bare, and that the haunts and habits of every predatory tribe should be made familiar to the Magistrates. It is suggested that the prosecution of these discoveries should be confided to one officer armed with general powers; but I consider that it would be more rapidly and more effectually carried out by the ordinary District Agency set in motion in a systematic manner.

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district, and were protected by the zemindars, there was no knowledge of their pursuits. An accident has revealed the extent of the injury this band inflicted on society, and I think the investigation should not terminate in Moozuffur-nuggur, or be restricted to one class of hereditary thieves. It is essential that the real extent of the evil should be laid bare, and that the haunts and habits of every predatory tribe should be made familiar to the Magistrates. It is suggested that the prosecution of these discoveries should be confided to one officer armed with general powers; but I consider that it would be more rapidly and more effectually carried out by the ordinary District Agency set in motion in a systematic manner.

4. With the aid of the information thus elicited, remedial measures will be proposed with more confidence, and tested with more ease: some are suggested in the correspondence, but I cannot support any which are dependent on extrinsic aid, and I am consequently opposed to the experiment of establishing reformatory agricultural colonies, work-shops, or manufactories. I trust to the effects of self-reformation, induced by a conviction that freedom from molestation is only to be secured by the adoption of honest habits.

5. The Legislature has armed Magistrates with the powers to instil such a conviction, and the enactments which confer this authority are especially directed against the tribes with whom we have to deal. Section 10, Regulation XXII, 1793; Section 10, Regulation XVII, 1795, and Section 10, Regulation XXXV, 1803, successively enacted for Bengal, Benares, and the Upper Provinces, declare that all vagrants or suspected persons without any ostensible means of subsistence, or who cannot give a satisfactory account of themselves, shall be apprehended and employed on public works, until they find security for good behaviour, or satisfy the Magistrate that they will obtain an honest livelihood.

6 The general application of this law throughout the provinces will set before the predatory tribes the option of undergoing an indefinite course of molestation, or of seeking to merit immunity by the adoption of new habits, and I am sanguine that if the law is steadily enforced, and the only security against its provisions is found, throughout the breadth and length of the land, to lie in submitting to a settled life, that the number of instances in which the law has to be applied will rapidly diminish The operation would be expedited by persuading landed proprietors that they incur no risk in giving honest employment to vagrants seeking a livelihood, and further progress might be made in raising the tribes in their own estimation by facilitating the education of their children

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II —*From* H H GREATHED, ESQ, *Officiating Commissioner of the Meerut Division, to* J A CRAIGIE, ESQ, *Magistrate of Moozuffurnuggur, No 11 of 1855, dated the 17th February 1855*

I HAVE the honor to transmit for your information a copy of a letter from the Commissioner of the Allahabad Division, to the Secretary to Government, noted below, on the subject of the arrest in Zillah Cawnpore of some thieves, who are supposed to form a part of a gang who have their head quarters at Tibrah and other villages in your district

2 As I am aware that you have been in communication with the Magistrate of Cawnpore on the subject, I do not deem it necessary to send copies of the abstract translations of the depositions of the parties named in the margin,* that accompany Mr Lowther's letter

* Nusseeba son of Goonna caste Boureeah inhabitant of Jubra aged 28 years.
Golab son of Muttra caste Rajpoot *alias* Boureeah inhabitant of Berar Kherah aged 80 years
Dhun Singh son of Mukhtar n caste Rajpoot *alias* Boareeah inhabitant of Tibrah aged about 60 years
Bhoondlah son of Munohura caste Thakoor *alias* Boureeah inhabitant of Tibrah aged 20 years

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Dhun Singh son of Mukhtar in caste Rajpoot *alias* Boareeah inhabitant of Tibrah aged about 60 years
Bhoondlah son of Munohura, caste Thakoor *alias* Boureeah Inhabitant of Tibrah aged 20 years.

3. I request you to be pleased to acquaint me with the result of your investigations into the haunts and habits of the parties implicated by the arrested thieves.

III.—*From* J. A. CRAIGIE, ESQ., *Magistrate of Moozuffurnuggur, to* H. H. GREATHED, ESQ., *Officiating Commissioner of the 1st Division; No. 14 of 1855, dated the 22nd February 1855.*

THE subject mooted in your letter No. 11 of 17th instant, formed part of a conversation I held with you when you visited this station; I then informed you that these Boureeahs had attracted my notice immediately on joining the district, and I had ever since been on the look out for some clue to their proceedings and evidence against them. It is a practice somewhat common among Magistrates to drive such gangs of gypsies out of their districts when their presence be reported by the police. It has always been my habit to do precisely the contrary, on the principle that a known thief, whose residence is also known, should be made over to the surveillance of the police, and be tethered as it were to his village; and not be projected into another zillah to carry out his pilfering propensities unwatched by, because unknown to, the Magistrate. I have therefore kept the families of this gang in my district, and waited for an opportunity, which has now presented itself, of hunting them down; for one of them, with neither skill nor courage, having been detected in thieving in the Cawnpore district, immediately confessed himself to belong to a body who make pilfering their trade, carrying on their pursuits during the cold weather, when travellers are numerous and encamping grounds yield booty. The Magistrate of Cawnpore sent me a copy of the man's deposition, and I at once put an intelligent officer on the trail. His enquiries elicited enough to satisfy me that the closest scrutiny is impera-

tively required, and I have accordingly put Imdad Hossein, tehseeldar of thannah Bhoun, Golab Singh, kotwal of Moozuffurnuggur, and Mehboob Buksh, thannahdar of Kuhtolee, (whom I had deputed originally) specially on this duty I do not expect their report for three weeks to come, but I have every confidence in its being complete and able As far as I see my way yet, it seems that these Boureeahs have been harboured for years by certain zemindars in this zillah with the connivance of the police, and the system ranges into the Punjab They appear to be dexterous thieves, and nothing more There is no suspicion as yet that they employ dhatoora or use violence The males sally forth at the beginning of the cold season, and return at the beginning of March There are only the women and children at present in the villages It is possible that this enquiry may not be brought to a conclusion by me, for it may be somewhat tedious and I have been offered promotion I therefore recommend the subject to your notice, and particularly with reference to the part played by the zemindars Receivers of stolen property and harbourers of thieves are, in my opinion, the parties above all others on whom the law should fall the heaviest for Magistrates can make no way whatever against criminals, if they find a sale for their goods, and a shelter for their persons, and when both these be afforded by the heads of the community, whom the law makes responsible for reporting the resort of such characters to their villages, the odds are indeed against the success of the executive I trust this enquiry may terminate successfully, and one description at least of professional thieves may be reclaimed, but the measures taken must be full and energetic in regard to the Boureeahs themselves as thieves, the zemindars as harbourers and sharers, and the police as having connived

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IV.—*From* H. H. GREATHED, ESQ., *Officiating Commissi of the Meerut Division, to* J. A. CRAIGIE, ESQ., *Ma trate of Moozuffurnuggur; No. 17 of 1855, dated 27th February 1855.*

IN connection with your letter No. 14 of the 2 instant, I have the honor to apprize you, that She Khair-ood-deen, Tehseeldar and Deputy Magistrate Bithoor, zillah Cawnpore, an officer of high character a distinction, has been deputed by the Commissioner Allahabad to proceed along the Trunk Road to Moozuf nuggur with two Boureeah approvers for the purpose eliciting further information regarding the gang of dep dators to which the approvers belong. Sheikh Khair-o deen will wait upon you shortly, and I beg you to do ev thing in your power to render his mission successful.

2. I entirely concur in the opinion expressed in y letter that a Magistrate does not fulfil his duty in mer expelling predatory tribes from his own district. Th suppression or reclamation are the tasks he should p pose to himself, and I trust that you will have time, bef leaving the district, to strike an effective blow agai the thieves and the harbourers of every degree.

3. In the event of your having to leave the complet of your measures to your successor, I beg you will impr upon him and upon all who are employed in rooting the gang, that the results will be looked for with inter and will be duly reported to higher authority.

V.—*From* H. G. KEENE, ESQ., *Joint Magistrate of Moozuff nuggur, to* H. H. GREATHED, ESQ., *Officiating Comm sioner, 1st Division, Meerut; No. 48 of 1855, dated 13th May 1855.*

IN reference to your letters No. 11 of 17th Februa and No. 17 of 27th idem, I have the honor to report follows, on the investigations which have taken place i the habits of the Boureeahs of this district.

2. In doing so, it is but justice to the Magistrates of past years to state that, the existence and character of these tribes have long been a source of anxiety But the guilty participation of the agricultural classes has formed a serious obstacle to the arriving at any data on which to proceed to their punishment or reclamation To this must be added the indifference, to use the mildest term, of the police, and, if I may be allowed the expression, the inadequate state of the existing laws On this point the following remarks are recorded by Major General Sleeman. It is a common practice among "thannahdars "all over the country to connive at the residence within "their jurisdiction of gangs of robbers on the condition "that they should not rob within those limits, and shall "give them a share of what they bring back from their "distant expeditions They go out ostensibly in search "of service on the termination of the rains in October, and "return before the commencement of the next in June, "but their vocation is always well known to the police, "and to all the people of the neighbourhood, and very "often to the Magistrates themselves, who could, if they "would, secure them on their return with their booty, but "this would not secure their conviction unless the perpe-"trators could be discovered"

3 Nor is this all A zealous Magistrate will not satisfy himself with enlarging a person he believes to be a source of danger to the community, merely because he cannot obtain proof that he has actually committed any particular theft He will avail himself of the *provisions* of Regulation XXXV of 1803, Section 10, *or of* Regulation XX of 1817, Section 20, Clauses 9, 10 and 11. But the nature of these proceedings is cumbrous *when applied to* hundreds of men, their carrying out *would be attended* with a total interruption of other *business, and there* would be no possibility of accommodat*ing one-tenth of the* vagrants in our jail or hawalat. Under *these circumstances,*

the general practice seems to have been for the police to report the presence of a gang, and request that they might be ejected from the district. In reply, the Magistrate has been in the habit of doing what he could, through the zemindars, with what results is now but too apparent. At length on receiving intelligence of the recent discoveries at Cawnpore, Mr. Craigie, on the 12th February of the present year, deputed a special commission of Police Officers under the orders of Synd Imdad Hossein, Tehseeldar of thannah Bhoun, (an officer of active habits and great acquaintance with the district,) in order that they might prepare a complete list of the Boureeahs, adults and young, male and female, absent and present; together with the names of the parties, landholders and others, who might prove to have any connection with or knowledge of their criminal pursuits. A translation of the tabular statement that resulted from these enquiries is subjoined,* from which you will observe that of a total of 1,302 persons, resident in this district, 481 were absent, no doubt on the predatory excursions which form the subject of present enquiries. These results are highly creditable to the sagacity and industry of the Tehseeldar: it is worthy of remark that though unfortunately he has not the power of a Court of Record, the whole of the subsequent proceedings and convictions have completely substantiated his report. Subsequently, Sheikh Khair-ood-deen arrived and collected some further information. But the field was exhausted and the stolen property, or written accounts, which would have formed the most valuable links in the enquiries, had been too carefully concealed or made away with, for any great amount of success to be expected.

4. Yet I trust the enquiries will not be considered to have failed. From the proceedings at Cawnpore, no less than those in this district, this much is evident, that large numbers of vagrants of peculiar habits and separated

* Omitted.

from the rest of the people are collected in a few villages of the western portion of this district, that the majority of the adult males have been for some time absent from their ordinary residence leaving their families behind them, that the landholders of the villages where they reside and who have formerly signed engagements not to let them absent themselves, have never given information of their going out or coming in, and were unable to produce them when called on, and that the same landholders are giving signs of enhanced wealth, building brick houses, &c Amongst the trifling property found in the tents of the Bourceahs, were a number of new instruments of Hindoo worship, apparently never used, which corroborated the opinion of their habits and practices to be submitted

5 The tribe is supposed to take its origin from Chitore, the ancient capital of Mewar in Rajasthan, and they claim to be considered Rajpoots Their name is derived from "Bawur, a word meaning ' snare, but whether with a metaphorical meaning I am unable to state They appear at present to be spread over a vast surface of country from the Jheelum to the Nerbudda, and having lost the support they formerly received from native chiefs are reduced to a wandering life Where the zemindars of any village encourage them to settle they form huts of straw and appear to remain there as long as they receive no molestation from the criminal authorities Although unscrupulous in their diet they profess to look down on the other wandering tribes, from whom they are distinguished by a somewhat better appearance, and by their wearing the usual *dhotee* of the Hindoos They are adepts at disguising themselves, and though not known to follow any form of faith beyond such fetichism and omen watching as is common to barbarians, are capable of assuming any form of Hindooism that may suit their purpose, insinuating themselves into the confidence of the guardians of temples,

till watching their opportunity they despoil the hriue of its valuables, and decamp. It would be most important to ascertain whether the skilful dhatoora poisoners of the lower Doab are of this class.

6. Such are the persons deliberately sheltered by the agricultural and mercantile society of nineteen villages in the district, nor can it be doubted that they profit largely by their thefts; whether, as Sheikh Khair-ood-deen is disposed to think, they are entertained as servants, (much as an English gentleman might keep a pack of hounds), or whether they merely pay a certain share of the booty to those who have protected and supported their families during their absence, and conceal their practices from the supreme power, is a question which our present information seems to me scarcely sufficient to solve. All that can be stated with certainty is that, when the cool season brings round the period of general travelling, and the relief of troops, they sally forth and infest the principal roads; the tents of such travellers forming the principal scene of their depredations, which are well known to every one, either here or in Europe, who has read any of the popular works on India. We are all familiar with the scenes so frequently described; the stillness of night, the cry of the jackal, the naked figure, eluding the grasp and gliding rapidly from the tent, having carried away the portable portion of the valuable property. The man who cuts the tent and enters it, employs the imitation of the jackal to give information to his comrades of the success of his enterprise, as well as to lull the suspicion of the inmates of the camp. Much wealth is thus collected and sent up from time to time to the village where the women, the children, the old men and some person of authority are awaiting its arrival. Of the principles and details of the distribution we have at present only the information of Sheikh Khair-ood-deen's informers, from which he has compiled a very interesting paper, a copy of which I have no doubt you will receive.

7 I am not without some solicitude lest it should be said of these imperfect remarks that they contain nothing but hearsay and conjecture Undoubtedly there is not to be obtained from one district, nor in one season, that fullness of information which would warrant any important measures either of repression or of reclamation It is, however, my humble hope that even the trifling results here recorded, combined with the proceedings of Sheikh Khair ood deen, may be of use towards establishing the primal fact that the evil exists, and is of magnitude, and I suppose that is enough under an enlightened Government The appointment of a control officer, and the erection of union work houses with a careful separation of the children from the adults, and a judicious use of the system of apprenticeship, would probably cause the Boureeahs to disappear in twenty years as a predatory class

8 There is one point of some delicacy involved Should the habitual assumption of religious disguises by the Boureeahs, and the guilty connivance of the zemindar be established, it will become necessary to take proceedings against many persons who may assert themselves to be clerical mendicants, and may bring substantial securities to support their assertion It is probable, however, that the approver system, in skilful hands, would meet all such difficulties

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VI —*From* R THORNHILL, ESQ *Officiating Magistrate of Moozuffurnuggur, to* H H GREATHED, ESQ, *Officiating Commissioner of the Meerut Division, No 54 of 1855, dated the 28th May 1855*

I have the honor to submit a few remarks and suggestions which will accompany Mr Keene s full report on the Boureeahs and their haunts It is very evident from the results of the tribes, as exhibited in the statement* annexed to Mr Keene s letter, that very little has been, or can be,

* Omitted

done until special orders be received from the Government. A number of persons have been seized and released, because, as the law now stands, they cannot be punished for belonging to a particular class, although it is well known that every member is a thief from his birth.

The Boureeahs have for many years lived and flourished under the fostering care of the zemindars; and with the connivance of the Police they have returned in safety to their homes, laden with their ill-gotten property. Now, although former Magistrates have had their eyes on these wanderers, still no satisfactory arrangement has been made to oblige them to live honestly.

To do so the Magistrate must keep the whole clan within the boundaries of their respective villages during the cold season, and at the same time he must provide for their support; for it is not probable that the zemindars would, in gratitude, for the large amount of property they have received from these thieves, now that their hopes of gain are departed, provide them with the means to earn their bread—ploughs, bullocks and land; and in carrying out this plan (to confine the Boureeahs to their villages) there would be a continual fight between the zemindars and Police; if the last could resist the bribes that would most certainly be offered, (which I much doubt,) even supposing the zemindars did give them bullocks or land, is it probable that men and boys, who, from their earliest childhood, have considered thieving their profession, who have for generations followed the same trade, would quietly set down and gain their daily food honestly, toiling for a few annas, when by thieving they could, with much less trouble, gain as many rupees.

Therefore we must put these Boureeahs into a country, from which they will not be able, without much difficulty and considerable danger, to escape to prosecute their annual tours along the Grand Trunk and other lines of traffic in upper India. It must also be borne in mind that

the Moozuffurnuggur district is not the only refuge for these thieves they exist in both Meerut and Kurnaul, and are spread over a considerable extent of country For this reason it is the more necessary that the case be taken up by the Government to ensure an uniform procedure, without which no good would result from an investigation conducted differently in different zillahs

I diffidently propose that the whole tribe of Boureeahs be transported to the Doon* of Dehra, (from which locality, they would find some difficulty in escaping,) that a tract of jungle be taken up by Government and cleared and brought under cultivation by these people, who will receive food and clothing from the State, or pay according to the work they may perform

Under an European† Superintendent manufactures could be introduced, and I have no doubt that this tribe of thieves would be changed into honest manufacturers and agriculturists

The rule laid down for the management of the colony must be stringent and enforced with vigour, no person should be allowed to absent himself from his village unless he holds a ticket of leave signed by the Superintendent, on which the headman, or Officer of the locality which he visits, will certify the date of his arrival and departure, forwarding a duplicate copy to the Superintendent Deputy Superintendents will be appointed to each estate, who will assemble the persons under their charge once every day. The punishment for absence from roll call will be severe

This system in time will answer the end desired, but, until the blood of the tribe has been thoroughly purified, we can hope for no reform, save that ensured by compulsion.

This generation and another must pass away in their new abode, having earned their daily bread by working

* Where labourers are much wanted

† I have no doubt that the European settlers would for a small remuneration undertake this duty

in some honest employment, and then the descendants of these robbers will have learned to consider their present abodes as their homes, endeared by the presence of their wives and children, and cultivating land their own property, and if a wish should enter their minds to re-visit the villages far distant, once the residence of their ancestors, the difficulties in the way of carrying their wishes into effect would soon banish the idea. The Police could not, without risking detection, connive at their return, the zemindars who protected them would now be the first to apprize the authorities of their escape. Mountains lie between them and the plains of Hindoostan, and the Police, in the passes, have received orders to prevent their egress.

Far better to live in their present and snug retreat than run the gauntlet through so many dangers.

P. S.—I beg to submit a plan proposed by Mr. Keene, (who has been engaged in Bourceah investigations for some time) to re-claim these professional thieves.

MEMORANDUM.

What should be done with these tribes?

Legally they should be confined; and this seems the only proper way of dealing with them. Drive them from zillah to zillah, and they will come to Cape Comorin and the Sea; but on the other hand to imprison thousands of people without ultimate plan, and under the present defective Jail arrangements, is hardly worthy of a civilized Government anxious for the welfare of even its meanest subjects.

Considering what has already been done in the analogous cases of thugs and dacoits, in which wandering criminals have been defeated by the operation of a central system, not trammelled by local restrictions, and have subsequently been partially reclaimed by being confined

in buildings appropriated them, where they have been taught various useful avocations, (in England, the principle of treatment is precisely similar), I would suggest that an officer be appointed, with a competent staff of native subordinates, to exercise the powers of a Magistrate throughout the North Western Provinces, and make the most searching investigations into the origin of all the wandering classes, known by the various names of Bourecah, Kunjur, Geedee, Sansee, Nuth, Kunchun, their habitat and customs, degree of dependence on landholders of particular localities, their powers of disguise, connection with thugs, or poison robbers, and all the miscellaneous information that would naturally present itself Every person apprehended, against whom it should be proved that he or she had no fixed place of residence nor ostensible profession, (begging not being so reckoned,) should be confined, in default of approved security, for life. All the children, under sixteen years of age, should be kept strictly separate from the adults, and on their reaching that age it should be lawful to apprentice them to respectable landholders for seven years, the latter entering into an engagement to employ them in the specific avocation they might have been taught in the work house, and to liberate them at the expiry of that period In these work houses both old and young should be taught some useful occupation after the fashion of Jubbulpoor and the Agra Jail, only with especial reference to agriculture, and when the Central Prisons are completed, and the Zillah Jails become vacant, I suppose some of the largest of these would be sufficient for the safe keeping and partial reclamation of the old offenders The management of the young might be thought to demand a more uniform and centralized system, in which case it would probably be proper to confine them in the Thug Jails, or in a separate department of the Central Jail at Agra as it may be hoped, the class would rapidly disappear, it

would probably not be advisable to erect any new building. Any young persons not disposed of as apprentices, might be removed to some under-populated part of the country, such as Hurrianah or the Doon, as it is to be hoped that they would, by that time, be free from hereditary contamination. Here they might have grants of waste lands and would no doubt form agricultural and industrial communities.

(Signed) H. G. KEENE,
Joint Magistrate.

MOOZUFFURNUGGUR :
The 28th of May 1855.

VII.—*From* H. H. GREATHED, ESQ., *Commissioner of the Meerut Division, to* R. LOWTHER, ESQ., *Commissioner of the Allahabad Division, No. 80 of 1855, dated the 12th June 1855.*

You are doubtless aware that the Magistrates of Cawnpore and Moozuffurnuggur have been in direct correspondence regarding the proceedings of an organized band of thieves of the Bourecah caste, who have been long located in the Moozuffurnuggur district, and in the habit of exercising their predatory profession along the Grand Trunk Road.

2. Subsequent to the opening of this communication, I was favored by the Secretary to Government, North Western Provinces, with a copy of your letter to his address, No. 13 of the 22nd January, and of his reply; and at later dates I was visited by Sheikh Khair-ood-deen, Deputy Magistrate of Bithoor, deputed under your orders to assist in the investigation that was being carried on in Moozuffurnuggur, and to aid the Magistrate of Moozuffurnuggur with his personal knowledge of the history of the gang, and with the revelations of the two informers who accompanied him.

3. It may not be uninteresting to you, or entirely unprofitable to the object of the investigation, to make you acquainted with the results of the exertions of the Magistrate of Moozuffurnuggur. I therefore enclose a copy of Mr. Keene's report, and of three statements which accompanied it.

4. The positive results are small, for the male portion of the Boureeah community were either absent on predatory excursions when the inquiry commenced, or anticipated the movements of the Police. But the clue discovered at Cawnpore has laid bare the haunts and habits of the gang, and exposed the connivance of the landed proprietors and Police, and will probably lead to the breaking up of the band and to the dissolution of their connection with their harbourers. The investigation will no doubt also attract the attention of Government, to the necessity of adopting systematic measures for the extinction of such predatory combinations.

5. The Magistrate of Moozuffurnuggur will keep a close watch for the absent or absconded Boureeahs, and it is yet possible that evidence may be obtained sufficient to secure a judicial conviction of the principal harbourers, receivers and accomplices.

I depend on the Magistrate of Cawnpore communicating to us all further proof that he may elicit affecting residents of this division.

6. The statements, &c., of which copies are forwarded to you will be submitted to Government, with some general remarks on the predatory tribes to which the Boureeahs belong.

VIII.—*From* H. G. KEENE, ESQ., *Joint Magistrate of Moozuffurnuggur, to* R. THORNHILL, ESQ., *Officiating Magistrate of Moozuffurnuggur; No. 85 of 1855, dated the 12th June 1855.*

IN compliance with your verbal instructions of yesterday, I have the honor to inform you that I have made enquiries and find that, in the house census of 1852, the following entries occur for the pergunnah of Khandlah with respect to Boureeahs :—

NAME OF VILLAGES.	MALE.	FEMALE.	TOTAL.	
			Agricultural.	*Non-Agricultural.*
Burral, ...	18	34	0	52
Hosseynpore, ...	66	95	14	147
Bunchara, ...	6	6	0	12

IX.—*From* H. G. KEENE, ESQ., *Joint Magistrate of Moozuffurnuggur, to* H. H. GREATHED, ESQ., *Officiating Commissioner of the 1st Division, Meerut, No. 61 of 1855, dated the 12th June 1855.*

I HAVE the honor to forward to you copy of a petition received from Tufuzzool Hossein, a Police officer deputed to Khandlah, to watch the movements of the returning Boureeahs. It appears to me to afford an illustration of the advantages to be hoped for from a central action; I have not yet acted on his request, as I do not wish the Boureeahs, who may be lurking in the neighbouring districts, to get wind of the proposed enquiries, neither do I think you will wish the thannahdar to go to the Magistrates with a general warrant; I have contended myself for the present with offering a conditional reward of ten per cent. on all recovered property, that may be proved to be stolen; to be divided equally between the Police and the informer, whom the thannahdar

is to direct to go quietly about and make his enquiries, so as to be provided with something more certain to proceed upon on the receipt of instructions from you. The want of a Deputy Magistrate at Shamlee is severely felt in cases of this nature

X —*From* H G KEENE, ESQ, *Joint Magistrate of Moozuffurnuggur, to* H H GREATHED, ESQ, *Officiating Commissioner of the 1st Division, Meerut, No 59 of 1855, dated the 12th June 1855*

I HAVE the honor to forward the accompanying ishtehars, and list of suspected property * found in possession of the Boureeahs for your information

XI —*From* H H GREATHED, ESQ, *Commissioner of the Meerut Division, to* R THORNHILL, ESQ, *Officiating Magistrate of Moozuffurnuggur, No 69 of 1855, dated the 23rd July 1855.*

WITH reference to your letter No 63 of the 12th ultimo, and previous correspondence regarding the measures adopted and proposed for the suppression and reclamation of the Boureeah marauders, I have the honor to request you to inform me, whether any further discoveries, arrests, or convictions, have intermediately taken place

XII —*From* R THORNHILL, ESQ, *Officiating Magistrate of Moozuffurnuggur, to* H H GREATHED, ESQ, *Commissioner of the 1st Division, Meerut, No 84 of 1855, dated the 1st August 1855*

I HAVE the honor to submit a report furnished by Mr Keene

2 If we are fortunate enough to pursuade the Boureeahs to return, (which will take some time to accomplish,) the best and surest way to reclaim them would be to allot so many families to the most respectable landed

* Omitted

proprictors in the district, particularly those to the eastward, by which means they would be detached from their former associates.

3. But until zemindars and chowdhrees have been consulted and confidence restored among the Boureeahs themselves, I refrain from saying more on this subject.

XIII.—*From* H. G. KEENE, ESQ., *Joint Magistrate of Moozuffurnuggur, to* R. THORNHILL, ESQ., *Officiating Magistrate of Moozuffurnuggur; No. 114 of 1855, dated the 31st July 1855.*

I HAVE the honor to lay before you a few remarks on some recent enquiries into the habits of the Boureeahs of this district. Appended is a list* of those at present found residing, a comparison of which, with the list formerly submitted, will shew that, while a number of those who had been on thieving excursions have returned, yet many who were then present are not so now; in fact there are only a few villages in which they have ventured to remain. This, I need not acquaint you, is not the result of any threats or prosecutions on my part; the fact appears to be that the measures taken have produced a general impression, specially on the harbourers who have no wish to employ the Boureeahs except as thieves, and are demanding large sums for permission to reside (under cover of security fees in some instances). The demand for these sums is of course tantamount to telling the Boureeahs to go forth and steal. In the meanwhile, numbers of them are stated to be encamped on the Paneeput bank of the Jumna, awaiting the final orders of Government. I have accordingly requested the Magistrate of that district to keep his eye upon them, till I hear finally what orders it has been determined to give.

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* Omitted.

2. I also beg to observe, that if the punishment of the harbourers has produced the above effects, there is nevertheless still room for the indulgence of a speculative spirit by such of the zemindars as choose to take their chance, in consequence of the uncertain administration of the laws affecting their responsibility. In the case of fourteen zemindars sentenced by me (as formerly reported) to various periods of imprisonment, and some of them amerced in various amounts, the Sessions Judge on appeal has halved all the periods and reduced the fines to almost nominal amounts. His proceeding to that effect is enclosed. No reliance is evidently to be placed on any motive but fear, in the lower class of zemindars who have long been accustomed to derive large profits from their nefarious connection with the Boureeahs; but I am inclined to anticipate better results from the agency of such men as Munsoor Ali Khan of Jullalabad, and Mohumed Ali Khan of Jansuth; if they can be persuaded to admit parties of Boureeahs in their villages as cultivators and farm servants. I am sounding them on the subject, and have sent for the three chiefs or "mehturs" of the tribe, with a view of ascertaining what probability there may be of their being able to induce the Boureeahs to exchange their* hazardous and unremunerative practices for the less exciting but more certain pursuits of agriculture. The only thing then wanting will be men of sufficient standing, who will be willing to make the experiment of employing them in the fields; and the two proprietors I have named may, I am sure, be relied on, if, as I hope, they will undertake the task; Eman Ali Khan, the farmer of Gundraon, and Sahib Ali, of Sumbulkherah, have also been consulted. I have only to add, that such measures should (in my opinion) be looked on as merely temporary. The reclamation of the rising generation is the ultimate point at which our efforts should be directed.

XIV.—*From* W. MUIR, ESQ., *Secretary to the Government, North Western Provinces, to* H. H. GREATHED, ESQ., *Commissioner of the Meerut Division; No. 1861 A of 1855, dated Head-Quarters, the 29th August 1855.*

I HAVE the honor to acknowledge the receipt of your letter, dated 6th instant, No. 98, submitting a correspondence with the Magistrate of Moozuffurnuggur, relative to the predatory tribe of Boureeahs resident in his district.

2. The Lieutenant-Governor has read your report, and the useful classified information which has been collected by the Joint Magistrate, Mr. Keene, with much attention and interest. He awaits the receipt from the Commissioner of Allahabad of the result of the investigations which were conducted by the Deputy Magistrate, Khairood-deen, under the orders of the Magistrate of Cawnpore. When he has that report before him, the general subject will have the further consideration of the Lieutenant-Governor, in connection with like measures which have been adopted, or proposed, at former periods, for repressing the criminal practices of these and other tribes, such as the Kunjur, Geedee, Sansee, Nuth and Kunchun, referred to by the Joint Magistrate, Mr. Keene, in his memorandum of the 28th May last.

3. In the meantime effective vigilance should be exercised in all the districts, in which people of the Boureeah tribe are now residing to prevent any renewal of their predatory expeditions at the close of the present rainy season. They should be closely watched, and the provisions of the laws of security and vagrancy, and of Act XI of 1848, to which the correspondence forwarded by you does not refer, should, as far as they may be applicable, be carefully enforced against them.

4. A copy of paragraphs 1 and 2 of your report, and of paragraphs 1 to 4 of this letter, will be also forwarded for the same purpose to the Commissioners of the Dehlie,

Agra, Allahabad, and Saugor Divisions, and for communication to all the Magistrates under them Direct and immediate reports to this office will be required from these officers in every case in which there may be reason to suppose that men of the Boureeah class have been concerned in thefts committed upon the roads during the ensuing cold season It is noticed that a number of the Boureeah tribe who have removed from the Moozuffurnuggur district in consequence of the recent enquires, are stated to be encamped on the western bank of the Jumna Canal in the Paneeput district

5 Copies of the correspondence on the subject will also be printed, after the receipt of the reports from the Commissioner of Allahabad, for general information

6 With reference to paragraphs 1 and 2 of Mr Keene s letter, dated the 31st July, No 114, the Sudder Court will be requested to send for the records of the cases in which the periods of imprisonment, adjudged against the zemindars and others concerned in harbouring these habitual plunderers, have been reduced by one half by the order of the Sessions Judge, and to record their opinion for the further general guidance of the Judicial officers, as to what would have been a proper sentence in such cases

7 It is not stated in any of the reports now before the Lieutenant Governor what punishment has been awarded to any members of the Police of Moozuffurnuggur, some of whom must have been guilty of long continued connivance at the protection given by the local land-owners to this class of systematic depredators *A further report is necessary* on this point

8 Every encouragement will, of course, be given to the Magistrate of [illegible]

Munsoor Ali Khan of Jullalabad and Mohamed Ali Khan of Jansuth

holders, such as [illegible] paragraph 2 of Mr Keene's letter of the 31st ultimo, who may be ready [illegible] of the Boureeah tribes to find, under [illegible]

bility, the means of an honest subsistence as cultivators, or farm laborers on their estates.

9. The enclosures of your letter are returned, copies having been kept for record.

XV.—*From* R. LOWTHER, ESQ., *Commissioner of Allahabad, to* W. MUIR, ESQ., *Secretary to Government, North Western Provinces, Agra*; *No. 152 of 1855, dated Allahabad, the 12th September 1855.*

WITH reference to your letter, dated the 8th February 1855, No. 430 A, I have the honor to submit, for the information of the Honorable the Lieutenant-Governor, a letter from the Magistrate of Cawnpore, dated the 9th July, No. 95, but which did not reach my office until the 5th instant.

2. Mr. Spankie has submitted a report, in original, from Sheikh Khair-ood-deen, Deputy Magistrate, containing the result of his proceedings in Zillah Moozuffurnuggur, which is very creditable to that officer. He has also submitted translations of the depositions there taken, which being too voluminous to forward by the letter dawk, are transmitted by the banghy, together with the deposition of Dhokul Singh, referred to in Colonel Sleeman's report, regarding the Budhuk and Bazree Dacoits.

3. Although the Deputy Magistrate's mission was not attended with any important results, still his proceedings contain much information of interest. His object was mainly frustrated, from the preliminary enquiries instituted by the Magistrate of Moozuffurnuggur before his arrival. It is also to be borne in mind, that from the evidence previously received, the Bourecahs leave their homes after the close of the rains, and remain absent, until they are driven back by stress of weather; so that at the time Khair-ood-deen reached Moozuffurnuggur, the gang had quitted their villages for the sake of plunder. No less than 359 were found absent, according to the Magistrate's

report; but Mr. Keene reported to the Commissioner of the Meerut Division that, out of 1,302 residents, 481 were found absent. It is at any rate satisfactory to find that seven mahajuns, in whose possession stolen property was discovered, have been convicted. These are the people who give direct encouragement to robberies, by purchasing the stolen property. Fourteen zemindars have also forfeited their recognizances, by holding out encouragement to the Bourecahs in their furtive propensities. It is to be hoped that the police, who have connived at these doings, will be severely dealt with.

4. The gang has, by the late proceedings, met with a serious check. The question now arises as to the best method of keeping them in check. They are not a class upon whom habits of industry can be readily imposed, and I think the suggestions contained in the 26th and 28th paragraphs of Mr. Spankie's letter, are deserving of consideration, as by giving them employment in different districts, in the Police department, a livelihood would be afforded, while their numbers would be considerably reduced; but I should prefer posting them in villages, instead of the Trunk Road. The zemindars, in their own part of the country, might be persuaded to assign lands to them as an experiment; but I am apprehensive it would prove a failure. The *pasees* frequently cultivate; the *goojurs* also; but the latter have no taste for such habits, as they find cattle stealing more profitable, and it is very difficult to induce them to cultivate. In one of the thieving villages in the Boolundshuhur district, I prevailed upon the zemindar to allot fields for some of the worst characters, and to make advances of seed and bullocks; they were very difficult to manage at the outset, and, to ensure success, I was obliged to post two chuprassees in the village to turn them out of their houses at the break of day, and to take them to their fields to cultivate, and to see that the ground was well ploughed. This plan

was not agreeable to the cultivators, but backed with the ready influence of the zemindar and tehseeldar I carried *it through. When the reaping season* came round with smiling crops in the place of a desert plain, their feelings were alive to the benefits arising out of compulsory industry, and they afterwards cheerfully followed the plough, though I do not pretend to say that they were entirely reclaimed from their innate furtive propensities. At the time I am speaking of, the goojurs were closely allied to the thieves in the Bullubgurh territory on the right bank of the Jumna, and a regular trade of barter was kept up on the principle that " exchange is no robbery."

5. I despair of reclaiming the Boureeahs; they are a specific clan; I do not think they can be brought to habits of industry, but we can make them useful by sending forth detachments to different districts under the charge of a well-paid jemadar of their own class. There are a great number in the cantonment of Cawnpore under the charge of a jemadar, and they are employed as chowkeedars at the officers' bungalows; the jemadar is security for their good conduct, and there are but few who refuse their services. I recollect an instance some years ago, in which a young officer in the course of relief was applied *to by the jemadar to take one of his men*; he refused on the grounds that he acted as his own chowkeedar: the jemadar warned him but to no purpose; his practice was to bolt every door, excepting the door of entrance, across which he placed his charpoy; the Boureeahs first made an entrance through the compound wall, and having reached the door, gently raised the charpoy with the officer asleep, and gutted his house of his guns and other valuable property. There is honesty amongst thieves, they scarcely ever rob a house which is guarded by one of their own clan. I would therefore try the experiment suggested in the 26th and 28th paragraphs of Mr. Spankie's letter and endeavour to reclaim them by

making them the paid servants of the State This will be the work of time, but by the gradual introduction of the system, we gain the advantage of reducing their numerical force as systematic robbers, and by keeping up a register of those unemployed, and strictly watching their movements and their means of livelihood, the gang may eventually be broken up Every encouragement should be held out to them to cultivate primarily on low rates, so as to afford them the means of an honest livelihood, and if possible to bring about habits of industry

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XVI —*From* R SPANKIE, ESQ , *Magistrate of Cawnpore, to* R LOWTHER, ESQ , *Commissioner, 4th Division, Allahabad, No 95 of 1855, dated 19th July 1855, forwarded 3rd September 1855*

I have the honor to submit a report on the enquiries instituted lately into the proceedings of a band of robbers on the Trunk Road, known as Bourecahs

2 The Trunk Road in this and other districts during the last few years has been infested by robbers, whose depredations have been carried on with singular success The police generally fixed on the wrong men as engaged in these robberies, and acquittals became a rule of practise The villages nearest to the scene of robbery were certain to contain a few men of equivocal character, or the zemindars had an object in denouncing others, whom the thannahdars were only too glad to arrest on suspicion, to satisfy their superiors that something was being done The following Table illustrates my remarks The Table is for a period of five years, and refers only to the Trunk Road in the Cawnpore district

Year.	Number of highway robberies.	Number of thefts.	Number of cases in which parties escaped.	Number of cases in which parties were apprehended.	Number of persons apprehended.	Punished. Cases.	Punished. Persons.	Acquitted. Cases.	Acquitted. Persons.	Amount of property stolen.	Amount of property recovered.	Remarks.
1850, ...	0	37	17	20	32	10	23	10	19	1,541 3 9	329 14 6	
1851, ...	0	55	34	21	25	17	17	4	8	1,854 5 6	327 12 3	
1852, ...	0	13	6	7	13	3	3	4	10	470 0 0	12 11 3	
1853, ...	1	28	13	16	28	13	21	3	7	1,674 1 6	132 2 6	
1854, ...	3	28	18	13	16	6	7	7	9	990 15 3	225 12 3	
Total, ...	4	161	88	77	114	49	71	28	53	6,530 10 0	1,028 4 9	

3 It became a great object to relieve the district officers of the discredit attaching to this state of things, and to detect, if possible, the depredators The police were compelled, by my predecessor, to exert greater vigilance, and to watch suspicious parties proceeding along the road

4 Towards the close of last year some seeming byragees were arrested in a village, bordering on the Trunk Road, in pergunnah and thannah Bilhour These men remained during the day in the village in which they had "squatted, and invariably absented themselves at night the chowkeedar reported this circumstance and their apprehension followed

5 Three of the men arrested made statements in which they admitted themselves to be thieves of the Boureeah tribe, professional and hereditary robbers, living in the district of Moozuffurnuggur They implicated one Naseeba as a notable associate, who lived in the village of Nanamhow, on the Banks of the river Ganges in thannah Bilhour Naseeba was apprehended and confessed that both he and the others belonged to an associated band of thieves, comprising hundreds in number, who made the Trunk Road the scene of their professional exertions during the cold season During the hot weather and rains they lived in their villages in the Moozuffurnuggur district under the protection of their zemindars, and supported by the proceeds obtained from the sale of the property acquired by theft during their tours During their absence on thieving expeditions the zemindars and mahajuns of the villages supported their families Their depredations extended from Moozuffurnuggur to Benares

6 On receiving these confessions, I communicated copies of them to the several Magistrates in my neighbourhood, and deputed Sheikh Khair ood deen, Deputy Magistrate of Pergunnah Bithoor, an officer of great promise,

along the Trunk Road, directing him to take with him some of the confessing Boureeahs, and to apprehend as many of the tribe as might be met with on the line. I also sent two of the Boureeahs to Allahabad, that they might be present at the religious fair there, and act as detectives.

7. I subsequently, after a conversation held with the Commissioner of the Agra Division and yourself, deputed Sheik Khair-ood-deen to Moozuffurnuggur with the sanction of Government, to prosecute his inquiries into the truth of the statements made by the confessing Boureeahs, and to make a general investigation.

8. I must confess that I was never very sanguine as to any such important results being obtained from these enquiries, as should lead to the conviction of the parties engaged in the robberies which had occurred on the Trunk Road. It was clear to me that the apprehension of the Boureeahs had been made too much of in the first instance, and that the communications addressed, under the orders conveyed in your letter No. 13, dated 20th January 1855, had been too precipitate. But I nevertheless felt certain that a great check might be given to the confidence of the Boureeahs generally, if their haunts were visited, and their villages placed under the strict surveillance of the Moozuffurnuggur police. I communicated to yourself and Mr. Unwin, and subsequently to His Honor the Lieutenant-Governor, my belief that these Boureeahs were the same men of whom Colonel Sleeman had written in his report on the Budhick and Bagree dacoits, and I placed before His Honor a copy of this report, and of a deposition* which is to be found in the 320th page of the report, which tallies exactly with the depositions taken on the apprehension of the Boureeahs now in custody.

* Deposition of Dhokul Singh, 7th May 1839.

9. The result of the Deputy Magistrate's enquiries fully bore out this opinion, and is embodied in his

report written by himself in English with considerable detail, which I submit without correction.

10. In the district of Furruckabad he arrested and forwarded to the Magistrate three thannahdars of the band, who were accustomed to give food and lodging and information to its members. The houses of these men were searched, but without success; the expedition had become known, and property and Bourceahs were alike not to be found.

11. Nothing appears to have been done between the Furruckabad and Meerut districts, except that the Deputy Magistrate visited and conferred with the Magistrates of the districts of Etah, Allygurh and Meerut.

12. Sheikh Khair-ood-deen reached Moozuffurnuggur in the beginning of March. He found that the enquiries had already not only commenced but were virtually terminated. The result of these inquiries as presented to the Moozuffurnuggur Authorities, is already written in the Joint Magistrate (Mr. Keene's) report: it is therefore unnecessary for me to notice it further than to remark that the Bourceahs had disappeared, though their existence was as well known as their profession.

13. Sheikh Khair-ood-deen not disheartened, set steadily to work to prosecute enquiries on his own part and for my information. He received ready assistance from the Moozuffurnuggur Authorities, and visited numerous (18) villages, and took the depositions of the zemindars and putwarees and chowkeedars. He deserves credit for his efforts; what remained for him to do he did; and his report is a very interesting one.

14. These depositions revealed the existence of a band of robbers numbering hundreds, of whom no less than 359 men were absent from their villages at the time, and engaged in thieving in all parts of the country. Their habits, customs, and means of living, and supporting their families, are precisely those recorded in the

deposition of Dhokul Singh above noticed; their religious customs, superstitious ceremonies, professional tricks, and variable custom in robbing are detailed at large in Sheikh Khair-ood-deen's report, to which he is entitled the full benefit. To it I accordingly refer you.

15. It is satisfactory to know that Sheikh Khair-ood-deen's exertions led to the conviction of 7 mahajuns, in whose hands property acquired by theft was found, and of 14 zemindars, who had failed to fulfil the conditions of certain bonds entered into by them in 1853-54. They had been called upon to furnish security for the good behaviour of the Boureeahs residing in their villages. They allowed, in fact, of course encouraged, them to absent themselves in the cold season of 1854, for the purpose of indulging themselves in the family failing, a love of robbery.

16. The confession of Dhokul Singh copied from Colonel Sleeman's report, the depositions of the confessing prisoners, of sundry zemindars, and putwarees are submitted with this report and that of Sheikh Khair-ood-deen.

17. It only remains now for me to suggest that the Moozuffurnuggur Authorities should be called upon to devise some means by which these Boureeahs might be confined to their villages, and restricted from the wholesale system of plunder to which they have devoted themselves, since they have again taken heart after their routing out in Colonel Sleeman's time, and in which there can be no question that they have been encouraged by the Police of that district. Sheikh Khair-ood-deen's remarks on this point should be noticed by the Magistrate of Moozuffurnuggur. Although the disposal of the Boureeahs rather belongs to the Moozuffurnuggur Authorities than to me, as I had some, though a small share in tracing out these robbers, I feel that I may be permitted to offer a few remarks on this part of the subject.

18 It is evident that a large number of villages in the Moozuffurnuggur district, and I have no doubt some in the Seharunpore, Meerut, Boolundshuhur and Delhie, districts, are infested by a band of robbers, working together for months in the year, under the direct encouragement of their zemindars, and with the indirectly acknowledged consent of the mofussil police officers in their several districts Their depredations extend to Benares in the Doab, and to Hydrabad, Sehore, and even to Bombay westward These people as they say themselves are not "men of yesterday" They have robbed for centuries; their ancestors robbed on a larger scale, and used violence The Boureeahs of to day and of Colonel Sleeman's time, are small men in comparison with their forefathers Their sole occupation is ordinary thieving, pilfering in fact, in which there is no chance of killing, or of any necessity for using violence, at the same time they will commit highway robbery, and do so when the opportunity is tempting and the spoiling easy. They will follow no other occupation or trade than that of theft, and though their present exertions are necessarily limited to mere pilfering, the spirit within them is essentially as strong and ardent as that which animated their forefathers to fight for the holy cause, and Ram's wife against the Demon Rawan, and induced them to engage in the delicate service of "cutting off mens' heads without their knowing any thing about it" Though the tribe were routed out 17 or 18 years ago, they have re appeared in as great force as ever, and are occupying the same ground They have not taken to any other trade or occupation The question is how are they to be made to do so

19. Sheikh Khair ood deen suggests that they should be collected together, and be compelled to cultivate either a tract near the Ganges Canal or near the Hills, that they should be settled into one village, and that a kotwal

should be appointed to control them; the burkundazes under him, and the village watchmen being selected from the Bourceahs themselves; that they should be treated as children, and a roll-call kept, and that they should not be allowed to leave their village without permission.

20. I must confess that I do not look with any confidence to the ultimate success of any such plan. It seems to me objectionable on the score of expense; for the collection of the Bourceahs if commenced, would, if vigorously prosecuted, turn out to be a very large one, and the Government would not only have to provide extensive grants of lands for these persons, but would have to support them for a very long period in comparative idleness. It should be remembered that old habits and a roving and truant disposition are not easily to be overcome, and as a general rule the confirmed habits of years can only be broken through and changed by years. Here is a tribe that for centuries has known no trade or occupation, but one of idleness. They live half the year in luxury, and as completely enjoy the *dolce far niente* as the Lazzaroni of Naples. During the remainder of the year they indulge in the profession of their forefathers, in which they take an honorable pride; a profession which requires little or no exertion but manual dexterity, and which they believe is certain to be crowned with success; and in which its followers are ever accompanied by the delightful sense that they are reaping where they had not sowed, and laying up for themselves a harvest of pleasure prepared for them by the labor of others.

21. It is manifest that the habits and customs of these people are not easily to be changed; that they will kick against the authority which points out to them the plough to be driven and the land to be tilled. They will not readily settle down to manual labor and fixed hours, whose labor has been slight of hand, and whose hours

have been given only to fancy and pleasure. Their numbers too would soon get beyond control, for the tribe, assured of Government support and a life of total idleness, would increase rapidly, and in far greater proportion to the growth of industry or love of agriculture among them.

22. The restraint proposed would be impracticable. The colony must be enclosed, the grants of land walled in, the guards must be on the alert night and day, if it is to be expected that these men will remain on their lands. As long as the world is all before them where to choose a location, they will, when they can be idle, do as their fathers did; they will desert and disperse, their wives and families following them.

23. If they remained, they would be a discontented, murmuring, repining set; doing as little as they possibly could, and looking for Government aid in every pinch. In every way that they could, they would be burthensome to the Government, which destroys their profession or reduces its practice to nothing but the power of recalling its traditions and past success. The plan has been advocated before, but has been condemned as impracticable, as expensive, as hopeless, and as demoralizing not only to the colony, but to the people in its immediate neighbourhood, and to the police of the district entrusted with its supervision.

24. Mr. Keene, the Joint Magistrate of Moozuffurnuggur, suggests the appointment of a central officer, and the erection of work-houses, with a careful separation of children from adults, and the judicious use of the system of apprenticeship. This he considers would make the Boureeah tribe disappear in twenty years as a predatory class.

25. I am tempted to ask, what labor is to be provided in their work-houses? Where are the workmen to live? What restraint is to be over them? Are the nineteen guilty villages in a circle? Is each village, or a cluster

of villages, to have its workshop? What work is to be done, and for whom? If the adults are to be separated, where are they to live? Are husbands to be separated from their wives; children from their mothers; if so who is to support them? I cannot but regard these suggestions as theoretical, and their reduction to practice impossible. I could state many other reasons against the proposition. But it is sufficiently clear that the Government, and Government Officers, have already enough to do with reforming and instructing the people; it is Figaro here and Figaro there; and, with the duty of providing for the occupations of a large population, already *condemned, for whom the workshops are more easily* found than labor provided, I must confess that, in my opinion, the conversion of the Bourceahs in this way is simply a delusion and an impossibility.

26. In my judgment, it is better to allow this tribe to remain dispersed, and its members in the villages to which they belong. Their numbers in every district in the North Western Provinces should be ascertained. I have numbers in this district (Pergunnah Ghatumpore,) chowkeedars, &c., their habits should be watched; their going forth and returning reported; their zemindars should be called upon for security for their good behaviour, renewable every year; monthly returns of the number of Bourceahs present in every village, verified by the Police, should be submitted to the Magistrate, and tested by that Officer, from time to time, in the suspected villages, and in person; above all, the security bonds should not be waste-paper, but the law, as it stands, should be enforced. The zemeendars, Bourceahs, and the police, should equally be brought to feel, that the old habits of the class must perish from effluxion of time, and that the beginning of the end had already commenced. Constant supervision, perseverance, and firmness in administering the law, in all cases in which the zemeendars had suffered Bourceahs of known bad habits

to absent themselves for any length of time, are the means by which the crusade against old habits and superstitions must be fought

27 Encouragement need not be wanting Without any lively hope that the tribe will soon betake themselves to agriculture, I would nevertheless allow no opportunity to pass of rewarding any zemeendar, who could show, on the evidence of his putwaree, verified by the tehseeldar, that he had added to the list of his cultivators so many *Boureeahs in the course of a year* For such conduct, I would remit a small portion of his Government revenue for that year, thus letting him feel, that he had obtained their aid at no cost to himself

28 Entertaining no very great expectation of a ready adaption of agriculture as a trade by these people, I would endeavour to look out for some other occupation for them, not involving much manual labour On the principle that catching a thief is the next pleasurable thing to thieving itself, I would make use of the Boureeah tribe as much as possible as burkundazes and chowkeedars along the Public roads Much might be done towards this, in the numerous districts of the North Western Provinces, and of the Punjab I would assign, when we know the number of these men, so many by way of experiment to each district, and as there are perpetually recurring vacancies and acting appointments, I believe that a very large number would be soon in the service of Government

29 It might be urged that these men are not at present in custody, and that I must first catch my hare, true enough but it will be found that they will return to their villages, when there is no cause for future apprehension Then the influence of the Officers in charge of the districts affected must be exercised, to make them voluntarily quit a profession which the late enquiries, and the measures now to be adopted, will satisfy them will turn out a losing one I throw this suggestion out as one means only towards

effecting an end, which can only be secured by greater and firmer resistance on the part of the Authorities; by personal activity on their part; by constant and persevering watchfulness, and unyielding administration of the law.

30. If there is any difficulty about the law, (I think there is as regards the Boureeahs) the punishment and restraint of these men should not be less difficult or attainable than is the case with respect to dacoits. Surely the admissions made in 1839, and the result of the present enquiries, have sufficiently established the propensities of the class and their predatory habits. These propensities are only indulged in out of their villages, and their disappearance from their homes is presumptive proof of the criminal purpose for which they have left them. Their appearance in any place away from their homes, or their apprehension on return, should subject them to imprisonment, as being connected with a band of robbers, say, as they do not use violence, for three years. This would be a far milder punishment than that to which persons are exposed who are proved to have belonged to a band of dacoits. *Vide* Act XXIV of 1843.

31. In conclusion, I have to express a hope that, although the result of Sheikh Khair-ood-deen's enquiries may appear insignificant, it may nevertheless be found interesting, and deserving of attention. With regard to the Boureeahs now in custody (28) in this district, as there are no direct charges against them, and little proof but their own confessions, I propose to release, and, with your sanction, try the experiment of employing them as policemen.

Since writing the above report, I have made more extensive enquiries regarding the Boureeahs of Cawnpore, Pergunnah Ghatumpore. These do not know whence they came. They are a low caste, and some state that they originally came from Oude. They are however reputed thieves. There is a large number of them doing chow-

keedaree work, and it is strange that the Baories or Bou reeahs of Marwara were in the habit of exercising this profession I have not got Colonel Sleeman's report by me just now, but I remember the fact, and brought it to Mr Greathed s notice However, I do not now think the Boureeahs here identical, though the Boureeahs of Moo zuffurnuggur are no longer a high caste, and their habits are equally dirty and offensive The mere difference in the spelling of the words would not, I think, be sufficient, since the Boureeahs of Moozuffurnuggur are, in other parts called Baories, Bowreas and Bowreeas I should imagine that Baories would be the proper word, from *baoree*, a well

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Deposition of Dhokul Singh, 9th May 1839

"I have no fixed residence, we live where we find it most safe and agreeable The Boureeah caste was origi nally Rajpoot, and our ancestors came from Marwar We have seven gotes or clans, (1) Powar, (2) Sohurkee, (3) Dubas *alias* Dabee, (4) Chowhan, (5) Tunwar, (6) Dhun dara *alias* Dhundhul or Collee, (7) Gordhee. We have also the Chamie clan, making eight Two or three cen turies ago, when the Emperor of Dehlie attacked the for tress of Chitore and besieged it for twelve years for the sake of the Princess Pudhunnee, the country became deso late and reduced to great distress, we were obliged to emigrate in search of subsistence and employment, and disperse, some went to one country and some to an other, those who came into the Dehlie territory were call *ed Bourees, those who went to the Gwalior territories* were called Mageens and Bagorras To the eastward, they were called Budhuks, and in Malwa, *Hubooras*; what they have been called in other parts, I *know not.* We are not people of yesterday, we are *of ancient and* illustrious descent When the Dewan Rawun *took away* the wife of the god Ram, and Ram *followed him to rescu*

ver her, men of all castes went to fight for him in the holy cause; among the rest a leader of the Bourees, whose name was Pardhee, and whose occupation was hunting. When Ram vanquished his enemy, and recovered Seetah, he asked Pardhee, what he could do for him: "Grant" said Pardhee, "that I may attend your Majesty, mount guard, and hunt in the intervals of leisure, and I shall have all that my heart wishes." The God granted his request, and his occupation has descended down to us. If any Prince happens to have an enemy that he wishes to have made away with, he sends for some of our tribe, and says, go and bring such or such a one's head. We go, steal into his sleeping apartments and take off the person's head without any other person knowing any thing about it. If the Prince wanted, not the head of his enemy but the gold tassels of the bed on which he lay asleep, we brought them to him; in consequence of our skill in these matters we were held every where in high esteem; and we served Princes, and had never occasion to labour at tillage. This was before the emigration and dispersion of the tribe. We who have come to the Dehlie territory and were called Bourees, took to the trade of thieving. Princes still employed them to take off the heads of their enemies and rob them of their valuables. At present the Bourees confine themselves almost exclusively to robbing tents; they do not steal cattle, or cut into houses; but they will rob a cart on the highway occasionally; any other trade than robbery they never take to. They reside in or near villages under the protection of landholders; and while out for long periods at their vocation, they leave their wives and children under their care. They give them the means of subsistence, and for these advances we are often indebted to them three or four hundred rupees by the time we return.

They put on the disguise of byragees, goossains, and other classes of religious mendicants, and go to Hydra-

bad, Sehore, and Surat, Bombay, Benares, and Allahabad, bring back stolen goods to the value of many thousand rupees every year. They merely steal, however, never commit dacoitee. These articles we give to our friends the landholders and shop keepers of villages. They give us sixty rupees for what is worth a hundred rupees or more; and out of this sixty, they deduct the advances made to our wives and children. We are obliged at the same time to give handsome offerings to the thannahdars and other police officers of our neighbourhood, and if we were to omit these offerings to either the landholders or the police, they would very soon get us seized, or turned out of their villages. We reside in the Meerut and Moozuffurnuggur district, and have in our interests the thannahdars and other police officers of Bhagput, Mooradnuggur and Burote, in the Meerut district; Khandlah in Moozuffurnuggur; and Ghuronda in the Dehlie territory; and some of us reside in the Boolundshuhur district, where we conciliate the police officers and landholders in the same manner.

We reside most in the Saharunpore district, but after the robbery at Dehra, our residence there was made inconvenient; our chief residences at present are—

Village.	Pergunnah.	District.	
Bhurdole, ...	Moradnugger,	Meerut,	Seven under Natha jemadar.
Rutole, ...	Baghput,	Ditto,	Under Bhuna twenty-two men.
Bukkole, ...	Ditto,	Ditto,	Under Wuree Mull, Sureejeet and Sondugur, twenty-three men.
Birae, ...	Ditto,	Ditto,	Under Hurchunder, a good many men.
Khundera, ...	Ditto,	Ditto,	Under Golab, son of Rutanee, eighteen men.
Keytuaree, ...	Sirdhana,	Ditto,	Under Kunhyea and Laeka four or five men.
Panchmee, ...	Gawlee,	Ditto,	Under Kulunder and myself five or six men.
(Forgotten,)	Binsulee,	Ditto,	Under Burwa and his son Purtab five men.
Sumolee, ...	Burote,	Ditto,	Under Ghusseeta ten or twelve men.
Sohara, ...	Ditto,	Ditto,	Under Chand, *alias* Joula, ten or twelve men.
Lohara, ...	Ditto,	Ditto,	Under Auta, son of Raboo, and his sons Doorjun and Golab, twenty men.
Kehra, ...	Khandlah,	Mozuffurnuggur,	Under Bouta eight men.
(Not known,)	Bordhana,	Ditto,	2nd Bouta, son of Mulkee, seven or eight men.
Hoseynpore, ...	Bordhana,	Meerut.	Under Keama and Kuleeana, sons of Sreechund, seven or eight men.
(Not collected,)	Binslee,	Ditto.	Under Soorja a good many.
Near Dunkole, ...	Baghut,	Ditto.	Under Purtab five men.
Kundal, ...	Ditto,	Bolundshuhur,	Under Bojuree five or six men, who brought booty from Lahore.
Ditto, ...	Ditto,	Ditto,	Under Bukhturam, son of Cheyna, five or six men.
Tilukwa, ...	Dasra,	Ditto,	Under Nuthoo, Sooputtea and Ruteeram, five or six men.
Ditto, ...	Ditto,	Ditto,	Under Tera, Cheyna and Summa five or six men also.
Ditto, ...	Ditto,	Ditto,	Under Sehrua, son of Jehureea, ten or twelve men.
Ditto, ...	Ditto,	Ditto,	In districts about Paneeput, Kurnaul and Hansie; Loba, son of Mungoo; Munktee, son of Dooree; Gama, Kenlunn, Juma and Hursookhun, jemadars, have each ten or twelve good men.

The man who enters the tent we call Kenmaw, and the one who stands outside we call Peetwal The former hands out the things to the latter, and passes them on to a third person There is always a leader with the party out of a hundred, the Kenmaw gets fifteen laid aside for him, and every other person engaged gets two, the rest are divided when we get home, and the landholders and police get their portions All our wives and children get shares The jemadar always takes the part of the Kenmaw and enters the tent, as that requires the highest qualifications, he gets his fifteen per cent for the united duties, but still shares equally with the others when he returns home If he demands more there is a great uproar made about it, and he is obliged to desist

When we are about to set out on our expeditions, we get a loan of twenty or thirty rupees from the landholders or merchants of the place, and two days before starting we sacrifice a goat and make burnt offerings to the goddess Davy, sometimes to her of the fiery [illegible] of Jewala in the Hummalah Hills, or to her of Kalka, [illegible] sometimes to our old tutelary God of Chitore We [illegible] sweetmeats and vow unwearied devotions or [illegible] we return successful, after all this we take the [illegible] thus —We go in the evening into the [illegible] in silence expect the call If the [illegible] call on the left, we set out without [illegible] the bark of a fox even will do If [illegible] right we return home, and try again [illegible] as soon as we get a good omen we [illegible] it in the morning, it must be [illegible] partridge, and jackal must call [illegible] If a deer cross from the left to [illegible] We have a couplet on this [illegible] crow and the deer cross from [illegible] snake from right to left, and [illegible] even the wealth that has [illegible]

We all of us carry knives to cut into tents, but those knives we bury in the ground, except while we are on the move. When the British army marched to invade Cabul, we robbed a tent at Kheera, and took of a good deal of property which we made over to the landholders. Some Government servants came to make search for it, but the landholders turned them out of the village; but on the road they met some of our women, and on searching them found some spoons in their petticoats. A great fuss was made about it, and a proclamation was issued, offering a reward for the apprehension of Hurchunda, who resided in the village of Bissar in the *pergunnah of Khandlah, in Moozuffurnuggur. There are* about a thousand men of the Bouree tribe in the district of Dehlie, Meerut and Bolundshuhur, all thieves by hereditary profession, and they are all fostered by the landholders, on whose estates they reside, and with whom they share their booty. They do nothing but thieve, and confine thieving almost exclusively to tents. Whenever they happen to quarrel with the landholder, they change their residence without difficulty, our women do nothing but look after their children, and enjoy what we bring home for them; we never take them with us.

The Mogeens and Baggooras, who reside in Malwa, and on the Chumbul river, commit dacoitee, burglary, and theft; they stick at nothing. They go in kafilas (large parties) sometimes carriers of Ganges water; sometimes as brahmuns, with the sacred string about their necks. The Haboorras commit theft. The Gojurs call us Geedeeas, and the Jats call us Bourees. Geedeea is merely a local name of our tribe. There is no distinct class of people of that name. The Sanseeas are not of our tribe; they are a distinct class; they are thieves, but seldom ascend to dacoitee. The Kunjurs are all thieves; they cut grass and make choppers, and bivouac in suburbs under huts of sirkee (long grass), but always thieve. They are to be

found everywhere in great numbers The Nutts dance, beat drums, and amuse people with their tricks, but they are at the same time all thieves Those who go about with snakes, are all thieves, we, like the Budhucks, have a language different from that of other people

When we heard lately that the Rajah of Nagpore was to come on a pilgrimage through Jubbulpore to Allahabad, four gangs of Bourees went to meet him in the disguise of Hindoo religious mendicants We lodged generally at places a mile or two from his camp, all day we were wandering about the camp, reconnoitering the tents, which at night we robbed Sewaram had seven men, Bouta, seven, the 2nd Bouta, whose brother Hajaree had been hung at Umballa, had six men, Gama four, but one of his four men was killed on their way down at Bhandere by some village watchman, in his attempt to steal some ghee We went on with the camp from Allahabad to Gya, and returned in four months to Meerut At Benares we cut into the tent of a Puthan in the Rajah s suite, and got his *turban* and a *necklace* worth six hundred rupees, the man awoke, and we had not time to take more At Gya we lodged at the Seetakoond and robbed a Muhratta of the Rajah s train, of two hundred Nagpore rupees, a red shawl, *two turbans*, and *two* red cloaks, and pieces of mulmul Between Chutterkote and Allahabad we robbed a tent of some money, silver ornaments, three shawls, a bidree hookah, and other things There were many other thefts committed, and we all returned safe, with the booty collected, to our homes

The red shawl I gave to Dhoona, the landholder of Bhudolee in Moradnuggur In Meerut, I gave him also two turbans The bidree hookah was given to the brother in law of Jumeent, chowdhree of Kheera The other shawls were all given to the landholders in payment of advances There were a number of silver ornaments which were afterwards melted and sold all these

things were lodged with the goldsmiths of Bidowlee and Searam; but when they found that I had been seized and taken to Meerut, they made away with them, lest I might get a party sent to seize them. Dhoona established the gangs in the jungle parts of his estate, where they still are. This expedition took place during the last cold season, and we returned only a few months ago. The Bourees committed several thefts in the Governor-General's camp, when the army was assembling for Cabul, and they follow all armies, and the camps of all lords and other great men.

(Signed) R. SPANKIE,
Magistrate.

A Report on the Robberies of the Boureeah tribe, inhabitants of Pergunnahs Khandlah, Jhinjhanah and Bidowlee, in Zillah Moozuffurnuggur.

1. All the papers which were prepared in my office, regarding a highway robbery committed on the Grand Trunk Road in Zillah Cawnpore, by which it appears that several robberies have been perpetrated on the Grand Trunk Road in the thannah of Bilhour, zillah Cawnpore. The thannahdar was ordered by the Magistrate to search and find out the culprits, and all the property stolen on the Grand Trunk Road, and also the chowkeedars who were ordered by the thannahdar to exert themselves and report if any suspicious characters were lying near the boundary of their villages, and, if so, to bring them at once to him. On this the chowkeedar of Kazeegunge immediately reported to the thannahdar that several byragees were lying in the above village, and that they remain there only in the day-time, and at night they go out somewhere else; the thannahdar then ordered the chowkeedar to bring them to him; the chowkeedar at once proceeded to his village, and brought over these three persons by name of Bhondlah, Goolaub and Dhun Singh, and they were immediately

searched by the thannahdar, from whom several things of suspicious nature were found on their persons after which they confessed to their having been regular professional thieves of the Baorie caste, in disguise of byragees, and they also stated, that one of their accomplices, by name of Nasseebah, was living near Nanamhow, in the garb of a byragee The thannahdar then proceeded there at once and searched his person and house, and a shawl of valuable description and several other things were found with him, the thannahdar brought him also over to the thannah, together with the things found, and then the depositions of the whole four were taken All of them confessed to having been of the caste of Baories, and inhabitants of the pergunnah and thannah Khandlah in zillah Moozuffurnuggur, and that there are hundreds of the same tribe who come out every year to rob at the commencement of the cold season, and then go back to their homes in the hot weather, with plenty of stolen property, and on their return give them over to their thangeedars, the landholders, and others who are mahajuns, and the police, by whose aid they reside, and under whose care they leave their wives and children, during their absence to rob

2 The thannahdar then forwarded these four men to the Magistrate, with his usual report, and they gave their depositions before the Magistrate, and stated the names, residence, and occupation of all the thangeedars, zemindars and mahajuns, and several other information connected with their case, and confessed of several other robberies which were committed by them many years ago, and pointed out the names of several villages where they were located

3 On receiving the above information on the 8th January last, the copies of their depositions were despatched to the Magistrate of Moozuffurnuggur, to trace out further enquiries into this case, and Golab and Dh[illegible] Singh, two of these men, were forwarded to the Magistrate

of Allahabad, to recognize and apprehend other Baories, who were wandering about in the garb of byragees, for the purpose of committing robberies in the Allahabad fair. At the same time I was ordered by Robert Spankie, Esq., Magistrate, to take Nasseebah and Bhondlah, Baories, to the Mukkunpore fair, for the above purpose. I immediately proceeded there and remained at the fair till the end of January last, while I was ordered back to Cawnpore; during my return from the fair another man, named Kurmah, was recognized by Bhondlah as being one of their party, who was apprehended, and confessed the same as the others.

4. On my arrival at Cawnpore, with the permission of Robert Lowther, Esq., the Commissioner of this Division, on the 6th February last, I was ordered by Robert Spankie, Esq., the Magistrate, of Cawnpore, to proceed to Moozuffurnuggur with these Baories, and on their being recognized, to apprehend the culprits, together with the stolen property, all along the Grand Trunk Road, and in that zillah where they reside which will be pointed out by themselves.

In obedience to the above orders on the 10th February last, I commenced my journey towards Moozuffurnuggur with Nasseebah, Bhondlah, and Kurmah, Baories, and with the permission of the Magistrate I took with me a mohurrir of the foujdaree, and 12 burkundazes from six thannahs.

5. On the 15th February last, on my arrival at Chibramow, a byragee, by name of Seeta Ram, and Rickhee and Moonee, brass-pot sellers, were pointed out to me by these Baories, as being their thangeedars, and on searching their houses, a few things were recognized by them as stolen property sold to them by these Baories: after preparing the necessary papers these three men, together with the property which was found in their houses, were forwarded to the Magistrate of Furruckabad, in whose jurisdiction they belonged, and then I recommenced my journey towards Moozuffurnuggur.

On the 3rd March last I arrived at Moozuffurnuggur, and by permission of H H Greathed, Esq the Commissioner of that Division, and H G Keene, Esq the Officiating Magistrate of Moozuffurnuggur, I proceeded into the district on the 4th idem, and he issued several purwannahs to the tehseeldar of Thannah Bhowun, and several other thannahdars to aid me When I arrived at Thannah Bhowun I was informed, that on the receipt of the copy on the deposition of Nusseebah and Bhoudiah, Baories, at Moozuffurnuggur, Mahboob Buksh, thannahdar of Kotwalee, was deputed on the 12th January last by Mr Craigie, the Magistrate of Moozuffurnuggur, to enquire and apprehend all the Baories and search their houses The thannahdar proceeded to those villages, and his enquiries and apprehension of Baories would appear to have been badly managed, owing to his having had the thannahdar of Khandlah, and Hurgoo Lall, mohurrir, and several other burkundazes from that thannah along with him, who were all intriguing with the Baories It was impossible that they had ever exerted themselves, or desired that a single Baorie should be apprehended, or any property should be found in their houses by whom they were rewarded and received great benefits for many years Then the thannahdar, who was deputed for this enquiry, returned unsuccessfully, and the case broke down from this careless enquiry to the dissatisfaction of the Magistrate

On the 12th February last, another tehseeldar, named Syud Imdad Hussein, of Thannah Bhowun, was selected, and directed for this duty When I arrived there, I found that the enquiries and apprehension of Baories were going on since January last, two months previous to my arrival, the whole of the Baories were, it seems, previously warned, so that all the stolen property, which had been received by the zemindars for years, was removed, and the Baories who returned subsequently, deserted, and those who were out robbing, did not return for fear of their being seized,

Had this affair been skilfully and cautiously handled by the thannahdar, who was deputed in January last, to enquire before my arrival, I am confident my efforts would have crowned my anticipations remarkably, and I would have recovered a vast deal of stolen property; still I thought it advisable to search the houses of these men who were named in the depositions of Nasseebah and Bhondlah, Baories, in the hope of getting something out of their houses.

6. On the 7th March last, together with the tehseeldar of Thannah Bhowun, and several other thannahdars, I proceeded to Shamlee, and to the villages of Burahra, Bural, Hosseynpoor, &c. &c., which were pointed out by Bhondlah, and Nasseebah, Baories, and I searched the houses of the zemindars who were their thangeedars and mahajuns, and found nothing in any of their houses except a few things which were recognized in the houses of seven mahajuns, viz., Sahmul, Durboo, &c. &c., who were seized, together with the stolen property which with these mahajuns were forwarded to the Officiating Magistrate with a separate roobakaree, dated 24th March last, and by whom they were punished. I then returned to Thannah Bhowun, from where I issued several perwannahs, directing the attendance at my office of the zemindars, putwarees, and chowkeedars of the villages of Joogeea Khera, Sonah, Bunherah, Bural, Surnoulee, Qumur-ood-deennuggur, Chajpoor, Huria Khera, Doongur and Doondoo Khera; these ten villages belong to the thannah of Khandlah; Phoosgurh, Rahitpoor, Beeleepoor and Jellalabad; these four villages belonging to the thannah of Jhinjhanah: Uzeezpoor, Yeheapoor, Soonahree and Rusoolpoor; these four villages belonging to the thannah of Bidowlee: and on their attendance I commenced my enquiries regarding the occupation and location of Baories in their villages. The whole of them gave out in their deposition that the occupation of the Boarie tribes is confined only to robberies, that they

do nothing else except commit robberies in the foreign countries, especially on the Grand Trunk Road, that they go out on their expedition every year, at the commencement of the cold season, and return generally in the hot weather, or as soon as they get booty of every description Their depositions, as above given, are lodged with the misl of Dehwar or villages, and the Murdoom Shoomaree or census signed by patwarees of each village, and the tehseeldar of thannah Bhowun is also lodged with each misl, and a general statement, shewing the names of all thangeedars, zemindars, and mahajuns, as well as the number and names of all the Baories who are absent for robberies, is likewise attached with the above misls which will show that 359 are absent now from their villages for robberies, and their names are also mentioned in the statement lodged with the Dehwar misl separately

7 By repeated investigation and particular enquiries and exertion on my part, I was enabled to find out that the Baorie tribe were originally Rajpoots, and that they were at the head of nine clans or gotes, as follows —*Tomur, Guhlote Soolnukhee, Dubas, Pawar, Dhumdara, Chowhan, Budharah* and *Dhandul*, and that they came from the Duccan country, and of their having taken up their habitation in these localities, and their reasons for so doing was that the head of their ancestors was a man named Ummur Singh, and his title was that of Pardie, who eat every animal without scruple, and his occupation was that of hunting, he used to eat the meat of animals and birds of every description, except that of the cow, peacock and cocks

8 —When Ramchund, the Rajah of Oude, went to war with Rawun, men of *all* castes went to fight for him in his holy cause, among the rest of them was Ummur Singh Pardie who also went with him, and when Ram vanquished his enemy and returned with triumph, he asked Pardie what he can do for him Pardie replied that I may be

allowed to live in the Duccan country and hunt in the forests; to which Ram agreed to his request, and permitted him to go and live in that country, where he went and took up his abode near Chittoorgurh, and in the course of time, his descendants multiplied. Some centuries back when the Emperor of Dehlie attacked the fortress of Chittoorgurh and besieged it for twelve years for the sake of the Princess Pudhunnee, the country became desolated and was reduced to great poverty, then they were obliged to emigrate in search of subsistence and employment and dispersed. Some went to our country and some to another; those who came into the Dehlie territory were called Baorie, Dehliewall and Punjaubee; those who went to the Gwalior territories were called Mangeeahs and Bunjaras; to the eastward they were called Budhucks, and in Malwah Haboorahs: from that time those who came to the Dehlie territory took to the trade of thieving, and as they found this employment easier than labor and tillage, and in a few years they became so skilful in their profession that they were employed by Rajahs, who were sending them to other Rajahs who were hostile to them to steal their valuable property and give to them. In consequence of this they were held everywhere in high repute. In corroborating this, Kurmah Baorie, one of the confessors, states in his deposition that he was himself in the service of the Rajah of Deig, near Bhurtpore, and 150 Baories more employed by that Rajah in 1825, when the British army assembled to storm the fortress of Bhurtpore; that he and the rest of the Baories had stolen from the British officers of the army, and the Rajah's tents who had assisted the English, and that they gave all their stolen properties to the Rajah of Deig, in whose service they were employed purposely for this duty, and that they received a monthly pay from the Rajah, but now that the Rajahs of modern days have become rather careful and crafty owing to the several rules and penalties devised by the British Govern-

ment, *do not entertain Baories in their service for that pur*pose, the Baories now confine themselves almost exclusively to robbing the British camps, and they do not steal cattle or commit burglary, *but they rob carts on the highway occa*sionally, any other trade than robbery they are averse to, they reside in or near villages under the protection of landholders, and while they are out for long periods in their vocation, they leave their wives and children under their care, who give them the means of subsistence, and they go about everywhere especially to rob travellers in the sarais and purraos, and all along the Grand Trunk Road, as well as rob the officers tents all the robberies that are committed in British Camps are almost all done by the Baories

They go in the disguise of byragees and goosaeens, and go every year towards Hydrabad Sehore, Soorut, Bombay, and along the Grand Trunk Road down to Benares, bringing back stolen goods to the value of many thousand rupees these articles they give to the landholders and shop keepers of villages under whose protection they have left their wives and children in their absence The landholders *and* shop-keepers then *give them* Rs 30 or 40 for an article that may be worth Rs 200 or more, and out of these Rs 30 or 40, they deduct the advances made to their families at all events every stolen goods they bring are taken by the zemindars, so that at the end they get nothing for it, merely the bare subsistence for them during their subsequent stay, and in their absence to their children, when I went to search all their houses, I found nothing in their huts, but only a few old rags, and they live in a most abject state of misery, the walls of their huts are not more than three feet high, and the doors are so small that no man of any size can go in the huts without stooping or sitting down and the thatched roofs are very badly constructed

When they go out to rob they take with them a knife to cut out the bundles and bags from carts on the Grand

Trunk Road, and a club for their protection. The man who enters the tent is called Kamaoo; the one who stands outside next to him is called Potwall; the former hands out the things to the latter, and passes them on to the third person; there is always a leader with each party, consisting of 8 to 10 men, sometimes 15; out of a hundred rupees Kamaoo gets fifteen, which is laid aside for him and every others of the gang each receving two rupees, the rest are divided when they return home; the landholders and police get their share also; the headman of a party, called Kamaoo, enters the tent, as that designation requires the highest qualifications. He gets his fifteen per cent. for this duty, but still he shares equally with the others when he returns home.

The ceremonies which they perform and the omens which they observe when about to set out on their expeditions are as follows; viz., when they get a loan of twenty or thirty rupees from the landholders or mahajuns of the village for road expenses, and two days before starting they sacrifice a goat, and make burnt-offerings to the *Goddess Davee,* and they also present sweetmeats to her; after this they take auspices thus; they go in the evening into the jungle and there in silence await their call. If the partridge or jackal call on the left they set out without further ceremony, and then they commence their journey at once without returning to their homes: if the voice of a fox is heard it even will do, and they will be able to steal a valuable booty: if any of them call on the right side they return home and try their luck again the day following: as soon as they get a good omen they set out. If they observe these in the morning, it must be before sunrise. If a deer crosses from the left to the right it is a good omen or sign. They have a couplet on this subject in their own language which runs thus:—

"Kagah mirgah daehneh aor bisyer baen hoe.
Gyee sumputah bahoorhay jo gurroor daehneh hoe."

The above couplet signify that if the crow and the deer crosses from the left to the right, and the snake from right to the left, and the blue jay from left to right, even the wealth that has gone from you shall come back, they will then be able to steal valuable properties without apprehension

The reason of their being in the disguise of goosaeens or byragees was ascertained from them, and they said that if without this dress on, they will not be able to steal, and if they go out in their own dress, they will be obliged to put up in the saraes or purraos, the doors of the saraes are generally shut up at night, and then they get no opportunity of coming out to steal at night, and if they put up in the purraos will not be able to steal at all, because the burkundazes and chowkeedars who are on the watch at night will seize them at once, for this they are always in the disguise of byragees, and they put up in the vicinity or in the villages, or near the munders or temples close to the Grand Trunk Road, if possible, and when the zemindars are informed of their arrival in, or near their villages, they send them food and treat them well, and provide them with every necessaries of life as a religious matter, from whence they go for begging in the day time in the purraos and saraes and in British camps, in order to reconnoitre and go at night to steal, leaving a boy or some weak man to guard their baggage, &c in their absence After committing the robbery they return to their locality and bury the stolen property on the spot where they perform their poojah, or somewhere else, and sit down as regular goosaeens without creating any suspicion, with beads in their hands When travellers report the loss of their property to the thannah in the morning, the thannah people search for the lost property and find out innocent culprits here and there, but they never suspect these real robbers, because they are respected and venerated by being goosaeens

After thus committing several robberies on the high road and other places, they purchase ponies and load their

ill-gotten booty on them and take them to their homes, and on their return they sell some of their booty to their thangeedars, who live along the road at the cheapest rate for fear of their being reported by them to the police, which would cause their immediate apprehension and seizure of their booty.

They have no fixed residence, they live where they find safety and protection from the zemindars, and the zemindars make them go out to rob on their own responsibility as is the case in zillah Moozuffurnuggur.

9. I beg to give a brief account to the Magistrate and the Government of robberies that were committed by three persons only, with their companions, and were confessed to by them in their depositions.

Nasseebah deposes that, besides several trifling robberies which were committed by him, he has robbed a shawl belonging to the Ranee of Burdwan at the encamping ground at Bawur, zillah Mynpoory, close to the Grand Trunk Road, which personage was on her pilgrimage to Muttra. The above shawl is lodged in the malkhanna at Cawnpore; he likewise states that he also committed a robbery in Buttawarah near the town of Oojjyn, in which he robbed 10 seers of moongahs or corals, worth Rs. 4,000; a third robbery he had committed was in the saraie of Beelundah near Futtehpore, where he robbed from a mahajun's bylie a pettarah containing gold ornaments, worth about Rs. 11,800. In this robbery he had with him Soonahra, one of the head men of their gang, and several other Baories, inhabitants of Bunherah and Bural, pergunnah and thannah Khandlah.

Bhondlah, the other Baorie, states in his deposition that he committed a robbery near the village of Barodah, in the Duccan country, and cut out from a bag of an elephant dealer 200 gold-mohurs, worth Rs. 4,000.

Kumah, a third Baorie, inhabitant of Qumur-ood-deen-nuggur, also states in his deposition that he committed

many robberies in his life time, one of them was lately committed at Mooftee ka poorwah, one march from Allaha bad, when he and his companion robbed from an officer s tent belonging to a European Regiment marching to the westward, a box in which they found Rs 800 in *cash*, and several other things which were distributed among them

The above facts are submitted for the consideration of the higher authorities, that if only three Baorie robbers can dexterously rob property to the amount of Rs 20,000, what then can be done by 300 of the same tribe of the pergunnah of Khandlah, who are proverbial and skilful in committing robberies with impunity every year on their expeditions to all parts of Hindoostan, specially on the Grand Trunk Road There is no doubt that 399 men who are absent for robberies, would bring away booty to the value of thousands and thousands of rupees which are melted down, and shared in those villages by the zemindars, mahajuns, and the Police of Khandlah With close and strict enquiry it would appear that all these robberies, hitherto committed by these Boureeahs, were done with the knowledge and *aid* of the zemindars of those villages, and it is quite evident, that if they were not protected and securely located by zemindars, it would have been impossible for them to go on for so many years with their marauding system, and if the zemindars had not supplied their wives and children in their absence with *food*, they would *never* have attempted to go out a mile out of their houses for robberies

10 In corroboration of the above statement, and the intrigues of the zemindars with these Baories, I beg leave to state, that Buctour Singh, Pertaub and Ramsahoye, zemindars of Bural, Put Ram, Goolab, Rutna and Nun dha, zemindars of Bunherah, Ameen and Kapoor, zemin dars of Huriah Khera, Pertaub and Zalim, zemindars of Qumur ood deennuggur, Ajaib Singh and Jeet Singh, zemindars of Surnoulee, Ressaul and Goorsahoye, zemin

dars of Chajpore; and Susram, zemindar of Chajpore; Mujlis and Mowashee, zemindars of Joogeeah Khera; Laick, Ummer Singh and Bhyroo, zemindars of Doongur; all which villages are in the pergunnah and thannah Khandlah, zillah Moozuffurnuggur, and who wrote supoordnamahs or deeds of delivery "some time ago, and got several of these Baories in their own clutches, and promised to make them till the land, and to make them present whenever they may be wanted, and will otherwise never allow them to go out of their villages for robberies, and would become security for their future good conduct, these documents were signed by the above zemindars and lodged in the Magistrate's office at Moozuffurnuggur; notwithstanding which, they, the zemindars, act quite the *contrary* through covetousness, and for their own personal benefits they even sent them out to rob now. At the time of my arrival in that zillah, and on their being told to cause their attendance before me, they stated in their deposition that these Baories, for whom they wrote supoordnamahs, are gone out to rob, and that they are unable to bring them before me: for this crime they were sent by me to the Magistrate of Moozuffurnuggur, and were punished according to the existing regulations.

11. The habitations of Baories in the village of Bural were authenticated to be the oldest, and the zemindars of that village are the *first* who afforded them protection, and received benefits from them, by which they became very rich and opulent, as corroborated by the deposition of Achpal Singh, zemindar of Bural, in which he states that he has removed all his property, such as jewels, gold ornaments, silver bullions, silver sticks, and several other valuables, to a place of safety for fear of their being recognized, and before had five villages in his zemindaree, now he has eleven villages, and is building a puckah kotee in the English fashion, which I have seen myself, and he

is the richest zemindar in that pergunnah When I went to that village and searched his house, not a single property of any kind, not even the cooking utensils, was found in his house, only a few months ago when several suspicious property of a valuable nature, such as silver bullions and silver fans were seized in his house as stolen property, and were kept in the Magistrate s office at Moozuffurnuggur for six months, but owing to the non attendance of the owner, the property was returned to him, that property also was not found in his house, it is evident that all this property had been stolen ones, and for fear of their being recognized by these Baories, they were craftily removed, this zemindar is more to be blamed than the others, he lives at Chajpore, the kotee he also built in that village, and he has got a share in the village of Bural There are 24 Baories now absent from the village of Bural for robberies as stated by the chowkeedars, the putwarees, and the zemindars themselves, in their depositions, which are lodged with the missels of that village

12 When the other zemindars saw the wealth of the above zemindar through these Baories, they also began to afford protection to them in *their* villages in order to derive the same benefits

In whatever places these Baories will be made over to the zemindars and located in their villages under their protection, they will be found in the same manner to be leagued with these Baories, and to send them out to rob as is the case at present in zillah Moozuffurnuggur for many years

13 I beg to bring to the notice of the higher authorities the intrigues of the late thannahdar Ghasee Ram, and the present thannahdar Mohumed Ahsun, who was a mohurrir in the thannah of Khandlah, or in the same thannah for many years, and Hurgoo Lall, mudut mohurrir, who is a brother of the late thannahdar, and the

dars of Chajpore; and Susram, zemindar of Chajpore; Mujlis and Mowashee, zemindars of Joogeeah Khera; Laick, Ummer Singh and Bhyroo, zemindars of Doongur; all which villages are in the pergunnah and thannah Khandlah, zillah Moozuffurnuggur, and who wrote supoordnamahs or deeds of delivery "some time ago, and got several of these Baories in their own clutches, and promised to make them till the land, and to make them present whenever they may be wanted, and will otherwise never allow them to go out of their villages for robberies, and would become security for their future good conduct, these documents were signed by the above zemindars and lodged in the Magistrate's office at Moozuffurnuggur; notwithstanding which, they, the zemindars, act quite the *contrary* through covetousness, and for their own personal benefits they even sent them out to rob now. At the time of my arrival in that zillah, and on their being told to cause their attendance before me, they stated in their deposition that these Baories, for whom they wrote supoordnamahs, are gone out to rob, and that they are unable to bring them before me: for this crime they were sent by me to the Magistrate of Moozuffurnuggur, and were punished according to the existing regulations.

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12. When the other zemindars saw the wealth of the above zemindar through these Baories, they also began to afford protection to them in *their* villages in order to derive the same benefits.

In whatever places these Baories will be made over to the zemindars and located in their villages under their protection, they will be found in the same manner to be leagued with these Baories, and to send them out to rob as is the case at present in zillah Moozuffurnuggur for many years.

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whole of the burkundazes of that thannah, who have been fully known to be in league with these Baories. Although the late and present thannahdars have forwarded several petitions to the Magistrate of Moozuffurnuggur, reporting the bad character of these Baories, it was merely a blind cover for his exculpation and defence; no petition later than 1853 is to be seen among the records, and the location of Baories in the villages belonging to that thannah of Khandlah was known to be more than 20 years.

When I arrived there, and commenced my enquiries in zillah Moozuffurnuggur, I issued perwannahs to the whole of the thannahdars of that zillah, requesting them to report, without delay, the number of Baories that were located in the boundaries of their thannahs, and also to report on their occupation and character. On this the thannahdar of Khandlah himself and the whole of the thannahdars of that zillah in general reported that the principle occupation of all the Baories tribe is thieving, and that they do nothing else but rob all along the Grand Trunk Road, between Meerut and Benares, and in the Duccan country, and on taking the deposition of all the chowkeedars, putwarees and the zemindars, they also confirm the above statement.

It is quite evident, and it appears by the thannahdar's own report, that all these facts were fully known to the thannahdar himself and to the omlah police of Khandlah many years before this, and that about 300 Baories, all famous robbers, were so safely located in the 10 villages belonging to his thannah. If the thannahdar of Khandlah was a faithful servant of Government and had been vigilant after them, on their return with the stolen property, he would have been successful in apprehending them at once with their properties long before this, and the numerous robberies committed by them up to this time, would have been stopped, and all the properties of travellers and others would have been saved.

14 In conclusion, I beg leave to state that the robberies by this tribe will *never* cease, until proper measures are adopted, and serious notice taken by the Government for the future, although for a short time, they may be induced to forego thieving, because they were very much annoyed and pursued by me, as I followed them on as far as Hurdwar, where I have succeeded in apprehending several of them and their haunts are now quite annihilated for fear of apprehension, but I do not think that they will leave it off altogether, as they are a regular uncouth race, and have never been put to any useful pursuits, such as tillage, &c, &c They are quite ignorant of any hard work, since their emigration from the Daccan country, up to this time they did nothing but rob, which became hereditary and natural to them, and it is quite impossible that they would leave off a trade so profitable, which was maintained by them for several generations, unless some *good* measures are adopted, and arrangements are made in future by the Government for their subsistence

15 The following is the manner which I can consider a better one for their subsistence and employment, and to keep them from going about to any distance for robberies, *ie*, that the whole of these Baories, inhabitants in zillahs Meerut, Seharunpore and Moozuffurnuggur, be collected together, and a tract of land, culturable, near the Ganges Canal or near the Hills, or any other place as the Government may wish, be pointed out to them for their residence, and be formed into a village, and a kotwal or superintendent, a man who bears a good character for honesty and integrity, be placed over them, and a thannah be established in that village, and the burkundazes of the thannah and chowkeedars of the village be selected from *these* Baories and a nominal roll of them, men women and children be kept in that thannah, and no Baories of any description be allowed to go out of that village without the permission, and a certificate obtained from

the kotwal; their absence must not exceed after sunset, and on their return, they must report again to the kotwal of their arrival, and the kotwal be authorized to mention in his diary, the individuals proceeding and returning from leave, and he will be also directed to write in his diary *every* occurrences, such as births, deaths and marriages, for the information of the Magistrate of the district to which the thannah may belong.

An advance of money to be made to these men as a tuccavee, to enable them to purchase bullocks for tillage, and seed and all the ploughing materials, and the grounds to be divided into parts or fields, and to be given to each man for cultivation. The kotwal will be careful to see them employed daily at their work, in having them thus employed for two or three years in this work, much benefit will be derived from it.

First.—The ground which is at present uncultivated will become culturable and profitable to the Government, which will yield a good sum of money every year.

Secondly.—In their employment in cultivating, &c., they will get no time and find no proper opportunity to go out to rob so. and they will be obliged to keep quiet in their villages and leave off the occupation of robbers altogether.

Thirdly.—By thus keeping them in employment for some time their children will be able to assist them in cultivation and will learn the work of their fathers, and by so doing, the thieving will be stopped for ever amongst them.

16. By having the above arrangements brought into operation, the whole of the travellers passing on the Grand Trunk Road, and others will be secure from loss, and no robberies of any description will be committed by these Baories in future, and the property of all the merchants despatched from one town to another along the Grand Trunk Road will be safe from the hands of these notorious and famous thieves, and public tranquillity will be restored to all the travellers for ever.

17 If any other arrangements which the Government may think proper to adopt for the above enormities, it will be better and advisable for the general tranquillity and benefit of India

(Signed) SHEIKH KHAIR OOD DEEN AHMUD,
Tehseeldar and Deputy Magistrate of
Pergunnah Bithoor, Zillah Cawnpore

XVII —*From* W MUIR, ESQ, *Secretary to the Government, North Western Provinces, to* C CHESTER, ESQ, *Officiating Commissioner of the Allahabad Division, No 2223 A, of 1855, dated Head Quarters, the 6th October 1855*

I AM directed to acknowledge the receipt of your predecessor s letter, dated 12th ultimo, No 152, submitting a letter from the Magistrate of Cawnpore, with a report from Sheikh Khair ood deen, Deputy Magistrate, of the result of his deputation to Zillah Moozuffurnuggur, and enquiries regarding the Boureeah tribe

2 In reply I am desired to state that as intended in paragraph 5 of the letter No 1861 A of the 29th August last, to the Commissioner of Meerut, an extract from which was forwarded to you with my docket, No 1864 A, of the same date, the collection of papers on this subject will now be printed, and the subject of watching and repressing, and if possible of reclaiming, the Boureeahs and other migratory predatory tribes, who infest different districts in these provinces, will have the close and continued attention of the Government

3 Mr Spankie, the Magistrate of Cawnpore, will hereafter report, through your office, the result of his proposed experiment of giving employment to 28 of the Boureeahs, who have been captured in his district, as policemen A few of the class should be selected by the Magistrates of all the districts along the Trunk Road and its branches, and employed as approvers during the pre-

sent travelling season, so as to trace and apprehend any vagrant parties who may venture out, notwithstanding the alarm that must have been caused by the recent enquiries and seizures, for the purpose of carrying on their plundering practices. A copy of the present letter will be sent for their guidance on this point to the Commissioners of the Dehlie, Meerut, and Agra Divisions, in continuation of the instructions of the 29th August.

4. The Lieutenant-Governor has noticed with approbation the zeal and intelligence shown by Sheikh Khair-ood-deen, Deputy Magistrate of Cawnpore, in prosecuting the investigation regarding the haunts and habits of the Boureeah tribe, and has read with much interest his creditable report of his proceedings.

5. The enclosures of your letter are returned, copies having been kept for record.

XVIII.—*From* Major W. C. Erskine, *Commissioner of Saugor Division, to* W. Muir, Esq., *Secretary to Government, North Western Provinces, Agra, No. 376 of 1855, dated Jubbulpore, the 3rd November 1855.*

With reference to your circular No. 1865, dated the 29th August last, regarding the tribe of thieves called Boureeahs on the Grand Trunk Road, I have the honor to state, that I have not yet received all the replies expected from the Magistrates in my Division, but the only one yet received of any consequence is the enclosed letter No. 113, dated the 19th September, from the Deputy Superintendent of Chundeyree, which came to hand to-day, and which I do not like to detain for the other replies.

2. It will be observed, that the Deputy Superintendent has good reason to believe that the class of thieves called Sunoreeas, who till lately had their houses in Chundeyree, and who still reside in Banpore and Tehree, are intimately connected with the thieves on the Grand Trunk Road.

3 Lieutenant Browne will, I am sure, do every thing in his power to apprehend and bring to trial the Sunoreeas in Banpore, and perhaps His Honor will address the Agent Governor General for Central India regarding the thieves in Tehree

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XIX —*From* CAPTAIN A SKENE, *Superintendent at Jhansi, to* MAJOR W C ERSKINE, *Commissioner Saugor Division, No 477 of 1855, dated Jhansi, the 29th October 1855*

WITH reference to your docket No 181, of the 7th ultimo, and its enclosures, regarding the Boureeah tribe, I have the honor to state as follows —

2 Up to this date, I have received no reply from the Deputy Superintendent of Jaloun to an enquiry addressed to him on this subject

3 The Deputy Superintendent of Jhansi has reported, that "to the best of his belief, the Boureeahs do not exist in that district

4 I annex copy of report No 113 dated 19th ultimo, from the Deputy Superintendent of Chundeyree, who appears to think that the Boureeahs and Sunoreeas who still exist in Banpore are of one and the same race

5 The non receipt of a reply from Jaloun has delayed my reply to your docket I shall report the tenor of Mr Balmain s answer to my enquiry when it reaches me

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XX —*From* LIEUTENANT G BROWNE, *Deputy Superintendent Chundeyree, to* CAPTAIN A SKENE, *Superintendent at Jhansi, No 113 of 1855, dated Lullutpore, the 19th September 1855*

THE perusal of the copies of the correspondence which has passed between the Secretary to Government, N W P, and the Commissioner of the Allahabad Division, relative to a predatory gang of thieves termed "Boureeahs," who have been thieving along the Grand Trunk Road,

has induced me to submit (should you deem them worthy of notice) for the information of Government a few particulars regarding the Sunoreeas, a race of wandering thieves, who reside chiefly in the native States around this district, and seem so closely connected by habits and customs with the "Bourceahs," that I cannot help entertaining an idea that the two tribes have been associated of late on the Trunk Road, supposing the latter are the race I take them to be.

2. The history of the peculiar habits and customs of the Sunoreeas has already been laid before Government, and it will therefore be superfluous for me to enter into any detailed account of them. Suffice to say, they are born thieves, and each generation in succession follows in the ways of its fathers. They have a language, or "slang" if I may so term it, which they use among themselves; they never use violence in robbing, and never rob during the night, or commit burglary; they seldom confess when apprehended; rarely ever give their real names and places of residence; and still more rarely is it, if they do confess, that they ever implicate one of the brotherhood. These are a few of their characteristics.

3. To effect their object, they assume all kinds of disguises, such as faqueers, brahmins, travellers, &c., &c. They go about generally in parties of two or three; and there is no quarter of India that is not visited by some of the tribe. They have been captured here with property stolen in Calcutta, Bombay, Gujrat, Baroda, Madras, the North-West, &c., &c.

4. Owing to the vigilance which has been exercised in this district for some years past, there are but few of the race left, and those few no longer follow their evil courses, but are cultivators. There are, however, a good many in the Banpore State, and a still larger number live in the Tehree State, who regularly keep up their old name as thieves. Their custom is to quit their homes and

families after the rainy season is over, and unless their trip is unusually successful, they probably do not return for two years, when they come back, a share of the spoil (which in many instances is very considerable) is given to the authority in whose State their families and houses are

5 Of late the Sunoreeas have been returning to their homes in Tehree and Banpore, and a short time ago I received information that a number of them had returned from their wanderings to Banpore I sent over, and captured them with some property of all sorts, and it appears that these men have been carrying on their trade at and in the vicinity of Etawah, in the North West It would be no great stretch for men who go out on such expeditions to visit the Trunk Road Moreover, an informer of the Sunoreea caste, who is in Government pay here, and was formerly a jemadar in his tribe, tells me that parties of Sunoreeas almost invariably visit the Trunk Road, chiefly from Cawnpore downwards

6 This man, who long ago exposed every thing connected with the Sunoreeas, informs me of a race of thieves who make the Trunk Road their sole place of resort, and though the name is somewhat different, I cannot help thinking the tribe he alludes to is identical with that of the Boureeahs

7 He says, that round about Fyzabad, in the Lucknow State, there are four villages inhabited by a caste of "Dunnoes,' who are called "Barwars They are a predatory race of thieves, as nearly as possible resembling the Sunoreeas Their system of theft by day only is the same, and their language among themselves is similar The "Barwars are, according to this account, to be found all along the Trunk Road in parties of three and four, and their chief victims are travellers of all classes They are so closely associated with the Sunoreeas, that it is extremely probable that the two races in many instances combine in their practices

8. I have merely offered these remarks in case the information afforded may in any way be of use to the Magistrates whose districts lie along the Trunk Road, or may assist in accounting for thefts from travellers along that line, and I trust they may not be deemed out of place.

XXI.—*From* W. MUIR, ESQ., *Secretary to Government of the North Western Provinces, to* MAJOR W. C. ERSKINE, *Commissioner Saugor Division, No. 3564 A, of 1855, dated the 21st November 1855.*

I AM directed to acknowledge the receipt of your letter, dated 3rd instant, No. 376, with enclosures, regarding a class of thieves called Sunoreeas residing at Banpore and Tehree, who are supposed to be connected with the thieves on the Grand Trunk Road.

2. In reply I am desired to state, that a copy of the letter of the Deputy Superintendent at Chundeyree will be sent, through the Commissioner, Allahabad Division, to Mr. Spankie, the Magistrate of Cawnpore, who has taken a prominent part in the enquiries regarding the "Boureeah" depredators, and who has peculiar means of obtaining information in regard to any other tribes connected or associated with them, for his further investigation and remarks, and for notice also of the particulars stated in the 7th paragraph regarding the people called "Barwars," said to be resident near Fyzabad in Oude.

3. A copy of your letter and enclosures will likewise be sent to the Agent Governor General for Central India, that he may address the Tehree Government on the shelter mentioned to be still found by men of the "Sunoreea" tribe within that chiefship.

4. A copy of this correspondence will also be printed in the number of "Selections" on this subject now in the Press.

5. The enclosures of your letter are returned, copies having been kept for record.

XXII.—*From* W. MUIR, ESQ., *Secretary to Government of the North Western Provinces, to* C. CHESTER, ESQ., *Officiating Commissioner, Allahabad, No. 3566 A, of 1855, dated 21st November 1855.*

I AM desired to forward, for communication to the Magistrate of Cawnpore, copies of the documents noted in the margin, regarding a class of thieves called Sunoreeas residing at Banpore and Tehree, who are supposed to be intimately connected with the thieves on the Grand Trunk Road.

From Commissioner Saugor, dated 3rd instant, No. 376, with enclosures.
To Commissioner Saugor, of this date.

XXIII.—*From* W. MUIR, ESQ., *Secretary to Government of the North Western Provinces, to* SIR R. N. C. HAMILTON, BART., *Agent Governor General, Central India, No. 3565 A, of 1855, dated the 21st November 1855.*

I AM desired to forward, for your information, copies of the correspondence noted in the margin, regarding a class of thieves called Sunoreeas, who have found shelter in the Tehree chiefship, and to request your attention to paragraph 3 of my letter to the Commissioner of Saugor.

From Commissioner Saugor, dated 3rd instant, No. 376, with enclosures.
To Commissioner Saugor, of this date.

XXIV.—*From* MAJOR W. C. ERSKINE, *Commissioner of the Saugor Division, to* W. MUIR, ESQ., *Secretary to Government, North Western Provinces, Agra, No. 388 of 1855, dated Camp Koolree, the 24th November 1855.*

IN continuation of my letter No. 376, dated the 3rd instant, regarding the tribe of thieves called "Boureeahs," I have now the honor to state, that the District Officers of Saugor, Jubbulpore, Nursingpore, Dumoh, Baitool, Seonee, and Mundlah, report that the tribe does not exist in their districts.

2. The Deputy Superintendent of Jaloun reports, that although there are no gangs of Boureeahs in his district, there are some six or seven families of them in Kuchwagar, but that they are not known to be thieves.

3. I enclose a letter on the subject from the Deputy Commissioner of Hoshungabad, who states that, with the exception of a few in the northern parts of Namour, no thieves of this class now exist, but formerly they were well known. He furnishes some particulars of their habits.

No. 144, dated 9th October 1855.

4. No. report has been received from Jhansie.

XXV.—*From* J. G. THOMASON, ESQ., *Deputy Commissioner 1st Class, Hoshungabad, to* MAJOR W. C. ERSKINE, *Commissioner of the Saugor Division, No. 144 of 1855, dated Hoshungabad, the 9th October 1855.*

I HAVE the honor to acknowledge the receipt of a correspondence referring to the existence of Boureeahs in this district, forwarded by your docket No. 181, dated 7th September 1855.

2. From enquiries made in this district, it appears that, with the exception of a few in the northern parts of pergunnah Nimawar, the Boureeahs do not exist in this district. Formerly they were a well-known and common class of thieves and robbers, who infested both the Hurda and Nimawar pergunnahs, but owing to the measures adopted against them, they are but seldom found now in any of their old haunts.

3. Moulvie Muzhur Ismael, the Assistant Superintendent at Hurda, has been, I believe, chiefly instrumental in punishing this class of thieves; and it is chiefly from him that I have derived the few following particulars.

4. The Boureeahs, Bagries, or Mougheyeahs—for these three names are indifferently, it appears, applied to this

particular class—are supposed to have come originally from Marwar and Jeypoor Without any particular employment, they move about the country in various disguises, the favourite one being that of mendicants

5 In this latter capacity they go about begging, and put up at different places, as suits their convenience, a short distance from a town or village The male part of the community are very fond of sport, and are good shots with matchlocks, with which weapon most of them are armed

6 The begging trade is chiefly carried on by the women, the men being engaged either in hunting or some enterprises of a more serious nature The character of mendicants is not, however, wholly laid aside by the men, some of them covering their bodies with ashes and painted marks of the gods they pretend to worship, and being able to read the "pothies, and other Hindoo religious works, are able to pass off their disguise very successfully

7 It does not appear that this class of men apply themselves to a particular method of robbery, *i e*, as dacoits, highway robbers, &c, but they are equally ready to take up each branch of this trade as the opportunity occurs

8 Their first object on obtaining property by unfair means is to keep it away from their own huts, and this they do by burying it in the ground, or concealing it in the first jungle they come to It is this fact which has often rendered it so difficult to punish them, for no property being found in their huts, when searched, it has often been found difficult to convict them of particular crimes

9 Formerly this class of people lived in great numbers in pergunnah Nimawar, where, owing to the interspersion of Holkar s villages with those ceded by Scindiah, and which are now under the British Government, great facilities of concealment were afforded.

10. The pursuit after them has, however, been too hot to render their living there any longer a profitable thing; whether as bad characters generally, or criminals in particular cases, many of them have been punished, and most of the remainder, leaving Nimawar, have gone into the country under Holkar's jurisdiction, and lying beyond the ghâts, which constitute the northern parts of that pergunnah.

11. Very similar to the Boureeahs are the "Thorus," another class of thieves, who, living in the same part of the country, earned their livelihood in the same manner. They too have greatly decreased in numbers, and, like the Boureeahs, have gone to the country above the ghâts to the north of pergunnah Nimawar.

12. The above few facts I have been able hastily to collect; and as further particulars would require a more detailed enquiry, I have not delayed answering your letter. Should any particular case occur in which any men of the Boureeah class are supposed to be concerned, information will be given of the same.

XXVI.—*From* W. MUIR, ESQ., *Secretary to the Government, North Western Provinces, to* MAJOR W. C. ERSKINE, *Commissioner of the Saugor Division, No.* 3737 *A, of* 1855, *dated Lieutenant Governor's Camp, Dehlie, the 11th December* 1855.

I AM directed to inform you, that your letter No. 388, dated 24th ultimo, and its enclosure, regarding the Boureeah tribe of thieves, will be added to the collection of printed papers on the subject now in the press.

BOUREEAH GANG PAPERS IN CONTINUATION OF ARTICLE II, SELECTIONS, No XXIII

I —*From* G F HARVEY, ESQ *Officiating Commissioner, Agra Division, to* W MUIR, ESQ, *Secretary to Government of the North Western Provinces, Agra, No 2 of 1856, dated Agra, the 9th January 1856*

IN connection with the subject of your letter No 2226 A, of 8th October last, which referred to your previous communication No 1863 A, of 29th August last, I have the honor to state that the returns received in this office from the Magistrates of this Division show, that in the Districts noted in the margin, the existence of Boureeahs as a class of depredators is unknown In the District of Agra a class of people, who are supposed to follow the vocation of thieves, were suspected under the denomination of "*Sirkee Bashees*" An intelligent Police Officer, Burkad Buksh, Thannadar of *Irradut* nuggur, was deputed to make enquiries, the result of which will be hereafter reported This deputation received the special sanction of my predecessor, Mr Lowin, [illegible] September last

Etah
Agra.

In Furruckabad a few suspected parties were [illegible] by informers of the Boureeah tribe as [illegible] of the tribe were found to have located [illegible] part of the District

MYNPOORY —The return from [illegible] no people of the Boureeah tribe [illegible] right, however, to forward [illegible] Officiating Magistrate Mr [illegible] contains a good deal [illegible] the customs, manners [illegible] tribes who [illegible] dators, and [illegible]

Mr H[illegible] at some [illegible]

is a useful supplement to the very intelligent report of Sheikh Khyr-ood-deen Ahmed, the Tehseeldar of Bithoor, which I have read with great satisfaction, as I am glad to find that an Officer recommended for employment to Mr. Greathed, the Collector of Cawnpore, in the first instance by myself, should have demonstrated his official fitness so speedily and successfully.

My own experience goes to shew that the *Budhuks*, to whom 20 years ago, and frequently since, the larger number of dacoit exploits were generally attributed; the *Harbourahs*, who have always been accounted to be. mere pilfering vagrants, who rarely concerned themselves with violent robbery; and the *Boureeahs* of the present time, are all one and the same people, springing from the same stock, and having for the most part the same habits of lawless recklessness. My attention shall be given to the subject constantly, and while I write, (9th December,) I have received a report from the Magistrate of Mynpoory of the occurrence of two highway robberies on the night of the 6th or early in the morning of 7th instant. Mr. Cocks had started himself on horseback to conduct the enquiry and pursuit in person. One is stated to have occurred at Shekoabad, and the second on the confines of the Furruckabad District. The Magistrates of both Districts are on the alert.

II.—*From* A. O. HUME, ESQ., *Officiating Magistrate of Mynpoory, to* H. UNWIN, ESQ., *Commissioner 2nd Division, Agra, No. 49 of 1855, dated 4th October 1855.*

WITH reference to your letter No. 634, dated the 3rd instant, and its enclosures, I have the honor to inform you that, as far as I can ascertain, there are absolutely no Boureeahs resident in this District, nor do I recollect having seen any during a careful scrutiny, for nearly two months of last cold weather, of the passers up and down the Grand Trunk Road. Their line of operations, I have

always understood, crosses the Jumna far West of this, at or about Agra, thence running down to Gwalior

2 A few families of Berias, and here and there of Konjeras, distinct and more respectable tribes, are to be found scattered over the District, earning ostensibly an honest livelihood as green grocers and cattle keepers The valleys of the Jumna on the South and the Kala Nuddee (or Kalundurie) on the North are tenanted by parties of Naths, and visited occasionally by small camps of Kunjurs, Harbourahs, and even Sansees, while an individual Budhuk, (who, however, will declare that he is a Kunjur,) and small companies of Jogees, Sampdhars, and Kamputtees, are at times to be met with in almost any part of this neighbourhood

3 These gipsey hordes have always been to me a most interesting study, and what little I know of them leads me to believe that they are deserving of much greater notice than they have hitherto received Some tribes of them, more especially the Harbourahs, Budhuks, Bhantee, and Sansees, are the perpetrators of a large proportion of those crimes of fraud and violence in which no traces of the offenders are discovered, while the fidelity, courage, and other good qualities which, in spite of their utter ignorance and degraded condition, they not unfrequently exhibit, should excite not only passing feeling of wonder, but an earnest desire to assist and reclaim them

4 The names of the principal tribes and sub tribes with which I am acquainted are as follows —

"*Harbourahs, Budhuks, Bhantee, Sansees, Beria, Konjera, Naths, (i e, Nath beranee, Chummer nath, Birjbasee nath, and Rukheree or Kungee wallah,) Kunjur, Jogeeah, Barwa, Sampdhara, Kumputtee, Baburecah, Ghundheela*

5 One of these tribes, that first upon the list, I have had peculiar opportunities of becoming acquainted with, and I trust that I shall be permitted to transcribe from my note book a few remarks in regard to them.

6. "The Harbourahs are divided into three goaths or classes,—*A.* Bhattee, *B.* Pownwar, *C.* Sohinkee, which I have arranged in the order in which they are esteemed. These names, it is worthy of notice, are common, and probably derived from the Rajpoots. Amongst themselves they have no doubt other names by which they are known, but these gipsey people, wherever I have met them, in Spain, England, Germany, or France, have always appeared to borrow the names by which they described themselves, their tribes and customs, the object of their worship, and their religious rites and festivals, from the nations amongst which they happened to be settled. In some cases, while in reality retaining their own customs and brotherhood intact, they have gone so far as to adopt ostensibly the religion of the people around them, on whose superstition and charity they subsist. Of this the Naths, with all their manifold sub-divisions of Sirsbao, Marorkee, Rator, Rawanah, Muchal, &c., in this country, and the Gasieras of Catalonia, Aragon, and Navarre, are conspicuous examples.

7. "To return, the Harbourahs worship one God, whom they here call Thaquorjee; they have no priesthood, they reverence nothing that the Hindoos do (such as brahmins, cows, &c.,) and they eat *every* thing that has life, (excluding snakes and fish,) such even as vultures, jackals, tortoises, lizards, rats, and alligators (both gurial and mugger) they also greedily devour roots, herbs and fruit. They acknowledge no virtue in the distinctions of caste, and will as willingly eat after a bhungee or a julaher, as after a brahmin or a syud.

8. "The three classes above mentioned intermarry, the wife and children being held to be of the same class (goath) as the husband. Polygamy is common. In the cases where a man dies leaving a brother and a widow, according to the Jewish custom, they almost always marry. Widows, or the wives of those who are transported for

life or sentenced to long terms of imprisonment if their husbands have left no brothers, marry whom they please, but invariably amongst their own people Degrees of consanguinity are but little attended to, and except parents and children, brothers and sisters, all are permitted to intermarry, men sometimes remain bachelors, but the girls are usually married by the time they are eleven years old Marriage seems scarcely to be with them a religious ceremony, it consists in placing four small coins in a diamond, outside which a circle is drawn, and round this the bride and bridegroom walk seven times Brides often have portions, but all the expenses of the marriage are defrayed by the bridegroom The bodies of the dead are simply buried, and on the day of death they hold a funeral feast

9 "Like the Arabs of the desert, each horde or clan obeys a chieftain of its own, while all of them acknowledge one common head of their tribe The present heads of the Harbourahs of the Cawnpore, Agra, Muttra Allygurh, Meerut, Delhie, &c circles, are Akeea and Motea, though the former has rendered himself unpopular by his many treacherous acts Headship, whether of clan or tribe, is hereditary, and the fidelity and obedience of these poor ignorant people to their rulers is a beautiful trait in their character If a crime has been committed by, and traced to, any horde, the chief immediately determines who are to be given up Usually a compromise is made with the Police, two out of six, or three out of eight, are made over to justice, the rest escaping All the chief does is to repeat a form of words and then taking two of the grains of wheat offered to their god, he places them on the head of the scapegoat The oath of the brotherhood is upon him and whether he be guilty *or not*, he confesses at the thannah, the Magistrate s Court, before the Sessions Judge, and goes to the gallows or to a life long exile without a murmur, confident that his chief and brethren

will, as they are bound, feed and protect the wife and children that he leaves behind, even before their own.

10. "They have no prostitutes amongst them. Their standard of chastity and purity may be a low one, but to it they attain. Women do take other husbands, when for any reason they are doomed to be separated for long from their former ones, and occasionally, though very rarely, leave their husbands openly and deliberately, and attach themselves to another; but so long as they live with their husbands, professing to be their wives, they are strictly faithful.

11. "They have a peculiar language of their own, which they assert is altogether different from that of the other classes; none of them can read or write, nor have they any books or scriptures; they have no definite idea of any future state, (though they seem to have a dim glimmering of transmigration of souls,) and only worship Thaquorjee as a means of saving them from sickness. Indeed, except in sickness or great misfortune, such for instance as the sudden appearance of a Magistrate or Police Officer in their camp, they never profess to consider it necessary to trouble him with prayers or other form of worship. At no time is their ritual a complicated one; it consists of an extraordinary manipulation with grains of wheat, the petitioners making at the same time a vow of sacrificing a goat or fowl, which is subsequently performed by half roasting the offering in a flame of ghee, in which salt and frankincense are thrown, and then feasting upon it.

12. "The system steadily pursued in many parts of the North Western Provinces in regard to these people is alone sufficient to account for all the mischief that they commit: and the wonder is, not that they are guilty of so many, but so few, acts of violence. Almost savages, and utterly reckless of life, they are perpetually goaded on to crimes; they are forbid to rest even for a single day, no matter where. The moment the Police hear of their

arrival, they proceed to drive them away, hounding them from village to village, with hard words, and often harder blows, from their own into some neighbouring thannah. There a similar fate, or often I am afraid worse cruelty and oppression, awaits them, especially if any crime has been committed lately in the neighbourhood, of which the authors are unknown

13 "And here it should be mentioned that the Harbourahs, as they constantly contemn and infringe our authority and laws, so they look to neither for support or protection, all cases of dispute between themselves, they settle amongst themselves, while no amount of tyranny or injustice on the part of others will, though it may drive them to some desperate act, induce them to claim redress in our Courts The consequence is that if they are suspected of any crime, they are harshly, I fear very harshly, treated by the Police, who have no fear of being called to account for the same, while if, to use the technical English phrase, they are not wanted, they become mere shuttlecocks in the hands of our energetic detectives, I should perhaps say scare thief preventives

14 "For a while it is true they may obtain a respite, halting in some thick jungle or barren waste by the river bank, and though at such a time they generally, with the connivance of the zemindars, rob at their ease the country round about, or even murder, with their short chisel pointed spears* and rusty swords, an assailant from whom they cannot otherwise escape, I look upon this rather as the natural result of the treatment they receive, than of any innate depravity of the people themselves

15 "This ignorant and unfortunate race, degraded, as it now seems, almost below the level of the more intelligent portion of the brute creation, contains within it the seed of much that is good and great the men are brave

* This is their characteristic weapon and the rapidity with which they dig out with it alone lizards rats &c., *from the longest burrows* in the hardest ground, is really surprising

and faithful; the women of a chastity unknown to the lower classes of any eastern nation, patient, hardy, daring. Surely it is well worth while, even as a mere matter of policy, to attempt to win them to us, and convert these wolves of the jungle into gallant soldiers and useful citizens. Hitherto the practice of our own Government, and the native ones that preceded it, has, with few exceptions, been to punish (too often erroneously) without terrifying, to annoy and exasperate without crushing; and we have the injustice of a hundred years to repair, ere we can hope to make them our friends. As it is, we cannot be surprised if they look upon us and the people around them as enemies; if, in a land of plenty, they are averse to starve upon the scanty produce grudgingly yielded by the barren wilds to which they are virtually exiled; or that, debarred from procuring by fair means the luxuries, nay even necessaries, that they see others around them enjoying, they should resort to cunning or violence for the gratification of their reasonable desires. Even were they so inclined, we will not let them earn an honest livelihood. Like the Rechabites, they must build no houses, nor sow seed, nor plant vineyards, nor have any, but all the days of their life must they dwell in tents; and dark and evil, it would seem, must their pilgrimage be in this land, where they are sojourners and strangers. We have sown the wind, and must expect to reap the whirlwind; we have hunted them from the jhow to the dak jungle, from the stunted date tree thicket to the thorny wild plum bush. Every man's hand has been against them; what wonder if their's too be against every man?

16. "I have at different times had a good deal to do with the Harbourahs, and notwithstanding the failure of Bhurt Singh's* experiment, I feel no doubt that ten years of kindness and *firmness* would convert them, dangerous as they now are, into trustworthy and faithful subjects.

* A talooquedar of Khyr Chundous, Zillah Allygurh.

They should be located in villages expressly prepared for them, on lands to be held rent free for twenty years at least in the Dhoon, the North of the Saharunpoor District, Bijnour, Pillebheet, Goruckpoor, or any other District where large tracts of fertile, though unoccupied, lands are at the disposal of Government Able workmen, from whom they should be encouraged to learn of every trade, should be distributed amongst them, and Government workshops and schools established, they should be aided in clearing and even for some years in tilling, the lands allotted to them, while every possible facility should be afforded for the disposal of the produce, whether of their lands or labour, they should be expressly superintended by some European Officer, who would be prepared to promote their comfort and improvement, heart and soul, and not to look upon his post as a mere appointment, and he too should be aided and supported by a numerous staff of picked and well paid native officials, and even perhaps for a time by a small body of troops

17 "At present they lie like an infernal machine beneath the keel of the good ship Government It needs, as the Santhalls have lately shown us, but a breath of fanaticism to rouse savages to rebellion and massacre, and it may be well for the authorities ere it be too late, to reflect on and provide for the possibility of a sudden mischance calling forth to rapine and murder the jungly thousands that haunt the delta of the Jumna

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III —*From* C P CARMICHAEL, ESQ, *Assistant Secretary to Government, North Western Provinces, to* G F HARVEY, ESQ, *Officiating Commissioner of the Agra Division, Agra, No 587 of 1856, dated Agra, the 28th January 1856*

I AM directed to acknowledge the receipt of your letter dated the 9th instant, No 2 reporting on the returns furnished by the Magistrates of the Agra Division on the subject of the Boureeah tribe

2. In reply I am desired to state, that the report by Mr. Hume is useful and interesting, and will be added, with a copy of your letter, to the printed correspondence on the subject now in the Press.

3. The enclosure of your letter is returned, a copy having been kept for record.

No. 6.

REPORT ON THE PLANS ADOPTED, AND THE RESULTS THAT HAVE BEEN ATTAINED IN THE SUPPRESSION OF THE CRIME OF CATTLE-STEALING IN MORADABAD

1 —*From* J STRACHEY, ESQ, *late Magistrate and Collector of Moradabad, to* R ALEXANDER, ESQ, *Commissioner of Rohilcund dated Naples, 28th March 1857*

SIR,—The orders of Government, No 1677 A, dated 6th August 1855, authorized me to entertain a small special establishment for the purpose of carrying out experimental measures for the repression of the crime of cattle stealing in the district of Moradabad I have now to report to you regarding the plans that have been adopted, and the results that have been attained

2 In Moradabad and the neighbouring districts, which border upon the Ganges and the Jumna, cattle stealing has been, from time immemorial, one of the most prevalent offences It constitutes the normal occupation of a large community, and this fact, added to the physical difficulties of the country in which the offenders live has rendered all attempts to repress the crime more or less unsuccessful My own experience has been entirely confined to Moradabad, but I believe that the account which I am about to give, will be found pretty generally app[illegible]cable to the neighbouring districts of Rohilcund and th[illegible] Doab Similar circumstances have produced similar [illegible]

3 There are two tracts of country, which in M[illegible] are the head quarters of the cattle lifters the [illegible] Ganges, and the pasture lands which skirt th[illegible] Terai, eight or ten miles below the [illegible] Himalaya

4 Of these tracts the Khadir [illegible] perguunah of Hussunpoor, is the [illegible] left bank of the river this strip [illegible]

average breadth of four or five miles. The course of the main Ganges frequently changes, and branches issuing from the principal river intersect the Khadir, and cover it with a net-work of streams. I believe that, on the other side of the river, the character of the country is very similar.

5. Through a large portion of this tract, the operations of agriculture must always be precarious. During the rainy season the floods are usually so heavy, and the soil is so saturated with water, that cultivation becomes to a great extent impracticable or unprofitable. The Rubbee is the only harvest of importance.

6. Broad tracts of land, covered with grass and low jungle, stretch along the streams. These afford good pasturage at seasons, when elsewhere all vegetation is burned up. It will be understood that in a country so circumstanced, the breeding and pasturing of cattle is often a more profitable occupation than the cultivation of the soil. All classes of the inhabitants possess numerous herds of cattle, and, during the dry season, the people of other parts of the district regularly send their cattle in large numbers to the Khadir, for the sake of the pasture to be found there.

7. The largest section of the population of the Khadir is Goojur. The Mewatees are also numerous, and Jats and Khagees come next in importance. Of all these, and especially of the Goojurs cattle-lifting is the normal and the most profitable occupation.

8. Probably at least seventy-five out of every hundred able-bodied Goojurs in this part of the country are thieves. This is true not only of the poorer and least influental members of the class. The zemindars who possess the largest share of wealth, and whose position gives them the greatest influence, are almost all receivers of stolen cattle and the inciters of the thefts that are committed. It seldom happens that any legal evidence can be obtained against them, but it is matter of public

notoriety, about which no sort of doubt exists, that the fact is as I have stated it There is nothing uncharitable in the assumption in any case, in the absence of direct evidence to the contrary, that every Goojur is a thief

9 Every thing combines to foster in this tract the offence of cattle stealing The people are thieves, who have hardly any consciousness of criminality when they follow their hereditary occupation, and the physical character of the country in which they live is such, that the repression of these predatory habits becomes a task of extreme difficulty It is no easy matter, either for private prosecutors or police to follow up the tracks of stolen cattle through these wild regions. To move through them is difficult at all times, and to do so becomes often almost impossible Rivers and swamps have to be crossed, tracts of jungle to be traversed, and a most unhealthy climate to be encountered, while the whole population is united in a common fellowship of crime, both by habit and by interest And even if it be known to what part of the country the stolen cattle have been conveyed, it is most difficult to recognize them among the great herds that graze over almost every portion of the Khadir

10 A considerable portion of the thefts of cattle that are committed take place in the Khadir itself The herds that are sent from other parts of the district offer an easy prey The Goojurs respect property belonging to people of their own class who live in the Khadir, and the maxim of "honor among thieves' is here almost always applicable But their depredations are by no means confined to the parts of the country near their own homes Hardly any portion of Moradabad or of the neighbouring districts is safe from the Goojurs of the Ganges Khadir

11 There is no doubt that a large proportion of the cattle thefts throughout the district, are either directly committed or are suggested, and incited by them. A regular

system of correspondence seems to exist between the Goojurs of different parts of the country. The cattle-lifters seldom keep the cattle that they have stolen, any where near their own homes, or near the places where the theft was commifted; they send them off to their friends in another thannah or across the river into another district, receiving other cattle in exchange. It is said, that the Goojurs of the Khadir of the Ganges are in frequent communication with those on the banks of the Jumna, and there is no doubt, that people who live at distances of many days' journey from each other, often carry on in this way extensive dealings.

12. These operations are managed so systematically and so expeditiously, and there is so little concert between the police of different jurisdictions, that detection is extremely difficult, and in the great majority of cases the offenders run little risk of apprehension.

13. In the actual commission of the thefts Mewatees and others are very frequently concerned, but the receivers of stolen cattle in the Khadir are almost always Goojurs. Every body who wishes to dispose of cattle that have come into his possession by any unfair means, knows that he can always find an immediate and a safe market in the Ganges Khadir.

14. Many of the cattle, stolen by Mewatees and others, are made over at once to the butchers of the towns, but the greater number are sent off to the Khadir as soon as they are stolen. Goojur thieves will of course never sell cattle to butchers. Thus the greater part of the cattle may be supposed to be alive for a considerable time after they are stolen, and, under a proper system, this fact would much facilitate the work of repressing the crime.

15. There seems to be nothing peculiar in the manner in which the actual thefts are committed. The peculiarity of these cases arises from the facts that I have stated, that the whole population of the Khadir consists either

of cattle lifters or of receivers of stolen cattle, and that people in all parts of the country know that the Goojurs are always ready either to purchase stolen cattle themselves, or to negotiate their transfer to other parties

16 The Forest and Terai is next in importance to the Khadir of the Ganges as a locality for cattle stealing The extensive tracts of pasture land attracts large herds of cattle, both from the hills and from the plains The Puharees are the chief sufferers, but it is not easy to learn the actual amount of their losses

17 They seldom prosecute in the Courts of the plains and they often give no information even to the hill Authorities There are a good many Goojurs in the villages near the edge of the Forest and a large proportion of the cattle stolen in this part of the district probably pass through their hands They send on the cattle in the way I have already described, to their Goojur friends in the Khadir, receiving in return either money or cattle stolen in some distant part of the country

18 Besides the Khadir and Forest, there is another part of the district where a good deal of cattle stealing goes on A belt of low dhak jungle, with little cultivated land stretches almost across the district, from Chujlait towards Chundoulee, through the thannah Divisions of Umroha, Asmolee, and Sumbhul This belt is generally three or four miles broad, and although the extent of pasture land is not sufficiently great to induce people to send their cattle from any great distance, the neighbouring villages often possess large herds, which find here good grazing ground A large proportion of the thefts committed in this part of the country are attributable to the Mewatees, and many of the cattle stolen are made over to the butchers of the towns, and immediately slaughtered

19 The rainy season is the time when the greatest number of thefts are committed The Goojurs and the other cattle lifters of the Khadir have then little occupa

tion in their fields, and have plenty of time to devote to the more profitable business of plundering their neighbours. At this season too, it is much more difficult to follow up the traces of the stolen cattle, and it becomes almost impossible, except to people who live permanently in the Khadir, to move about quickly among the rivers, and the swamps, and thick jungle.

20. The Statement No. 1,* attached to this letter, shows the number of cases of cattle-stealing that have occurred during the last five years, in the Moradabad district, with such other particulars connected with the subject as I have been able to collect. The Statement No. 2,* gives similar particulars for the neighbouring districts. The figures contained in these tables will shew the magnitude of the evil, and how powerless to arrest it have been the operations of our Courts.

21. In the Statement for Moradabad, the results reported for the year 1852 have been inserted for the sake of uniformity: but they are not to be depended on. These figures would seem to shew that in 1853 there was a vast increase of crimes; this was not really the case, and it is notorious that before Mr. Roberts turned his attention to the matter, the greater number of cattle-thefts were not reported by the police at all, or were reported as cases of straying. It is not necessary that more should be now said on this point, but it is right that I should notice it, lest conclusions should be drawn unfavorable to the administration of my predecessor, an admirable Officer, who needs no praise from me.

22. I must now give some account of what has been done towards checking this crime in Moradabad. In 1855 I reported to you that the number of thefts was still increasing. The following extract from my letter, No. 38, dated 12th May 1855, gives a summary of the facts of the case as they were exhibited by the Annual Statements for

* These Statements are lost.

1854. [This Extract is lost, as well as the original letter from which it was made] In consequence of this report, I was authorized by the Government to entertain a special establishment for six months at the rate of Rs. 97 per mensem, for the purpose of endeavouring to check the crime Imam ood deen, kotwal of Moradabad, was to superintend the operations, and he was invested with the powers of thannahdar throughout the district These orders were passed by the Government on the 6th of August 1855, but it was not until near the end of the year that much was attempted, for Imam ood deen could not be spared from his duties as kotwal, in consequence of the possibility of disturbances occurring during the Mohurum

23 Although, as I shall shew presently, a very considerable share of success has been attained, the experiment was carried on under most unfavorable circumstances Mr Bensley Thornhill's removal from the district in February 1856, made it impossible for me to remain myself in the pergunnah of Hussunpoor to superintend operations, as I had hoped to do, while, at the same time, I lost a most efficient and zealous co adjutor in the work, who had made himself well acquainted with the whole subject Two months later, I was myself compelled by sickness to go to the hills, and consequently I have neither been able to carry out my own schemes, nor have I had the opportunities which I had hoped for, of making myself still better acquainted with the system under which the operations of the cattle lifters are carried on

24 *The practical results that have been actually* gained are mainly due to Mr Johnston and Mr Cockerell, who, after I left Moradabad, exerted themselves to the utmost for the repression of this crime

25 The mere fact of the appointment of Imam ood deen, who was known to be the best detective Police Officer in the district, with a special establishment, had

doubtless a great effect in frightening the Goojurs, and in making them more cautious in their operations.

26. I took advantage of the remodelling of the police establishment of the district, to establish a number of outposts in the Khadir, in all the places where the cattle-lifters were the most notoriously numerous and bold. These outposts were made over to first class jemadars, who, as well as the burkundauzes subordinate to them, were chosen from the most efficient men at my disposal. There are now eight* police stations in the Khadir, of which four have been newly established. This has been a very useful measure. There are now posts commanding all the principal ghâts across the Ganges, at distances from each other not exceeding three or four miles, and if the police do their duty, it is easy for them to learn all that is going on.

27. I also made many changes in the thanna establishments of the pergunnah of Hussunpoor, and chose men for the principal posts who I thought were likely to exert themselves for the repression of cattle-stealing. The main credit, however, of all that has been done, i due to Imam-ood-deen. He has exerted himself to th utmost, and has continued fully to merit the high opini which I and all his superiors have long held of him.

28. Imam-ood-deen was relieved of his ordinary du as kotwal of Moradabad, in October 1855, the cu business in the city being conducted by the naib ko A mohurrir and duffadar were appointed to assist I ood-deen in his enquiries, and burkundazes chos himself were given him from the regular police for on the first report of a case of cattle-stealing, the

* 1.—Alinuggur.
* 2.—Biha.
* 3.—Jeora.
* 4.—Futtehpoor.
5.—Sherpo
6.—Tigree
7.—Rehra
8.—Sirsa.

The new stations are marked thus.*

police succeeded in apprehending the offenders, Imam-ood deen did not ordinarily interfere; but all cases were made over to him in which the original police investigation had failed, or in which for any reason it seemed likely to fail. All the thannadars understood, that in all that concerned the offence of cattle-stealing, they were to look upon Imam-ood-deen as their superior Officer, and that all their proceedings were to be regulated and superintended by him. Unity of management was the first essential of success.

29. The influence is very great which the more important Goojurs of the Khadir exercise over the community of cattle-lifters. It is notorious that they can always, to a great extent, stop these thefts if they chose, and that they can, in almost every case of cattle stealing, ascertain who are the real offenders, and what has become of the cattle. In a great number of cases they derive a direct profit in the shape of a share of the stolen property; but as they are always careful to keep themselves in the back ground, as they take no part in the actual thefts, and keep none of the stolen cattle in their own possession, to obtain legal evidence against them is, under our existing system, next to impossible. It was clear that *any success was out of the question unless* these people would exert their influence to assist us. In dealing with a class of hereditary thieves, who look upon plunder as a perfectly legitimate and a most profitable occupation, fear is the sole influence which can be brought to bear with any immediate useful effect.

30. The laws regarding dishonest livelihood can with difficulty be applied to these Goojurs. They are not vagrants, or people with no other means of subsistence, but often holders of considerable estates. The zemindar is just as bad as the common cultivator. Although a Magistrate has now no *sufficient* legal means of dealing with such cases, and although he cannot hope to dispose

of them in a manner which shall give complete security for the future, he can still, as the Chief Executive Officer of the district, do a great deal, without any infringement of the law, to make their position a very uncomfortable one. The danger of injustice to individuals by the exercise of a somewhat arbitrary authority is, in such cases as this, very small, if the Magistrate be fit for his work. If he is unable with all the great means at his disposal, to ascertain the true character of the landholders and the police of his district, through whom he has to act, it is entirely his own fault. Believing this, feeling no fear that I should be guilty of injustice, although I might fail to obtain in every case all the evidence which the technicality of our law requires, professing, moreover, not the slightest sympathy with men of whose criminality I was certain, I had no scruples in my dealings with these Goojurs. Every man who was a notorious receiver of stolen cattle was summoned by me; if it was possible, he was imprisoned or called on to give heavy security, and if n legal evidence could be obtained against him, I did m best to impress upon him, and prove to him, that he wou lead a very uncomfortable life as long as he contin to exercise his predatory propensities. Consequen much was done which cannot be illustrated by tal statements.

31. Several offenders against whom complete existed, and whose conviction would have been c were released on condition that they would turn vers, and thus much useful information was Imam-ood-deen was in communication with man who were well acquainted with all the proceedin cattle-lifters, and who were in reality thieves th

32. I now proceed to describe the actual have been arrived at. In my Police Report gave my reasons for believing that, althoug there was an apparent increase in cattl

crime had in reality diminished Greater care was taken that all cases should be reported, and fewer cases of theft were shewn as cases of straying The numerical results for 1855, as compared with previous years, will be seen in Statement No 1.

33 —As Imam ood deen only began his operations at the end of 1855, the results were hardly to be seen in that year

34 —The following figures will shew the improvement that took place in 1856, and the whole of this is fairly to be attributed to the new measures.

YEAR.	No of cases of cattle stealing	Head of cattle stolen	Head of cattle re covered	Estimated value of cat tle stolen.	Estimated value of cat tle recover ed
				Rs	Rs
1855,	499	898	326	10,915	3,065
1856,	296	522	209	5 623	2 365

35 —The following table shews the returns of cases of straying for the two years, and this too is satisfactory

YEAR	Head of cattle reported to have strayed	Head of strayed cattle re covered	Estimated va lue of stray ed cattle	Estimated va lue of cattle recovered	
			Rs	Rs	
1855,	2,694	1,209	20,093	9,380	
1856,	2,732	1,617	20,819	12,086	

36 —The number of apprehensions, convictions, and acquittals, remained nearly the same as in the previous year, but as the number of cases was so much smaller, this is really a very satisfactory result.

The following is a summary of the actual expend

[illegible] ...				(
[illegible]	260	0	0	
[illegible] ...	130	0	0	
[illegible]	97	8	0	
[illegible]	13	0	0	50
Total Rs., ...				50

The total expenditure has thus fallen short amount sanctioned by Government, by Rs. 7-5-8.

46. In conclusion, I wish to repeat my high s the services which, in this as in all other matters ed to him, have been rendered by Imam-ood-deen, of Moradabad. Any success that has been ga entirely due to his exertions.

47. I must not omit to mention that, while eng these operations, Imam-ood-deen was also severa employed with much success in the investigation cases of theft in which property to a large amou been stolen. He has indeed to some extent acte sort of Superintendent of Police. For such an offi establishment of which in each district I have lon cated, Imam-ood-deen would be in all respects well

48. I regret that I was unable to complete thi before I left India. It has been written under stances which will, I hope, serve as my apology f manifest imperfections.

I have, &c.,

J. STRACHEY,

Late Magistrate of Mo

(True Copy.)

JOHN STRACHEY,

Officiating Ma

* Note, 1859.—Imam-ood-deen has well maintained his high since this report was written. His loyalty has been conspicuous services that he has rendered have been valuable.

introducing *de novo*, any such system into a country here it does not already exist. Such expedients as this re evidently nothing better than barbarous and very mperfect substitutes for an efficient system of Police, and although they may be tolerated for a time as the means of checking crime, when no better means exist, it is clear that nothing else can be said in their favor. The following extract from Mr. Greathed's Police Report for 1855, so entirely expresses my own opinion on this subject, that I cannot do better than quote it here.

"The crime can never be more than slightly repressed
"by procuring the restoration of the stolen cattle through
"the medium of the zemindars to whose villages the
"tracks are supposed to have been carried. To attack it
"effectually, the criminals must be reached, and made
"to feel that cattle-stealing is not a safe trade. This
"remains to be effected, tracking as a means to the dis-
"covery of the cattle, and thieves should be encouraged
"* * * But if the tracking leads to no actual
"discovery, something else should be tried, the facts of
"the tracking remaining on record for future notice. It
"is highly injudicious that the enquiry should be diverted
"from the pursuit of the criminals to the recriminations
"of the zemindars through whose villages the tracks
"passed. Merely to fine the zemindars with whom the
"tracks were left, would be an unsatisfactory termin
"tion to a case, and it would be illegal on the me
"evidence of tracks to charge them as receivers or ac
"saries."

45. The sum sanctioned by Government for t operations was Rs. 95 per mensem, for six months. whole amount was thus Rs. 570. I did not consi necessary to adhere to all the details of my origin position in determining what expenditure should curred. I thought it sufficient not to exceed t amount which the Government had sanctioned.

The following is a summary of the actual expenditure:—

Paid to informers, in small presents, diet, &c.,	...		62 2 4
To Emam-ood-deen, horse allowance, from 1st October 1855, to 31st October 1856, at Rs. 20,	...	260 0 0	
		130 0 0	
		97 8 0	
		13 0 0	500 8 0
	Total Rs., ...		562 10 4

The total expenditure has thus fallen short of the amount sanctioned by Government, by Rs. 7-5-8.

46. In conclusion, I wish to repeat my high sense of the services which, in this as in all other matters entrusted to him, have been rendered by Imam-ood-deen, Kotwal of Moradabad. Any success that has been gained is entirely due to his exertions.

47. I must not omit to mention that, while engaged in these operations, Imam-ood-deen was also several times employed with much success in the investigation of other cases of theft in which property to a large amount had been stolen. He has indeed to some extent acted as a sort of Superintendent of Police. For such an office, the establishment of which in each district I have long advocated, Imam-ood-deen would be in all respects well fitted.*

48. I regret that I was unable to complete this report before I left India. It has been written under circumstances which will, I hope, serve as my apology for many manifest imperfections.

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Officiating Magistrate.

* [illegible]